

SERVICE MANUAL

JumboTron

MODEL
.....

DEST.
.....

LDU-1530S

World

LDU-1530L

World

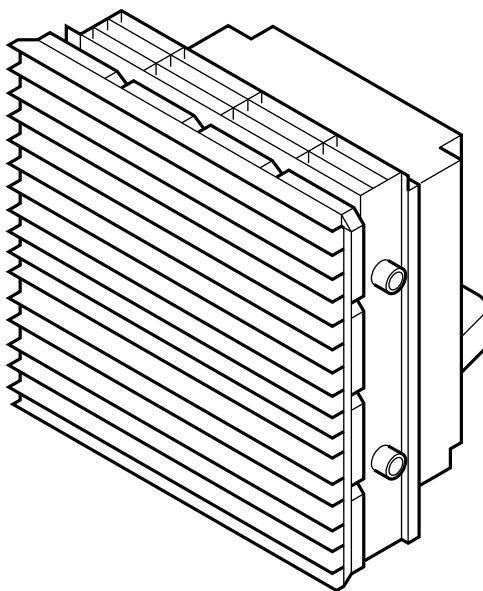
LDU-1540S

World

LDU-1540L

World

REVISED-1



LED Jumbo Tron Display Unit

SONY[®]

⚠ 警告

このマニュアルは、サービス専用です。

お客様が、このマニュアルに記載された設置や保守、点検、修理などを行うと感電や火災、人身事故につながる可能性があります。

危険をさけるため、サービストレーニングを受けた技術者のみご使用下さい。

⚠ WARNING

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

WARNING!!

AN INSULATED TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF THE LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY A \triangle MARK ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION!!

AFIN D'ÉVITER TOUT RISQUE D'ÉLECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ÊTRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE \triangle SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

CAUTION OF UNIT

CAUTION

1. To Avoid Unit from Dropping
Always attach the wire to the unit before installation or removal to avoid injury by accidental drop of the unit.
2. Do Not Look LED Light Straight
Looking LED light straight in close distance, when LED is ON, strong light may be harmful to your eyes.

Specifications

Display element:	Full color LED cell × 16
Maximum brightness:	3000 cd/m ² (1530L, 1530S) 4000 cd/m ² (1540L, 1540S)
Color temperature:	7000 K (1/2 brightness)
Uneven brightness:	±3% or less (front, between pixels)
Pixel pitch:	15 mm × 15 mm
Visible distance:	7.6 m or more
Angle of visibility:	Horizontal +60 ° (1530S, 1530L) (1540S, 1540L) Vertical (50%) Up 30 °, down 60 °: (1530S, 1540S) Up 15 °, down 40 °: (1530L, 1540L)
Operating temperature:	0 °C to +45 °C
Storage temperature:	−20 °C to +60 °C
Humidity:	90% or less (no condensation)
Drip-proof:	Surface drip-proof structure (equivalent to JIS Grade 5)
Power supply voltage, frequency:	AC100 ~ 240 V ±10%, 50/60 Hz
Power consumption:	Maximum 100 W
Signal input:	15-pin connector
Power supply input:	3-pin inlet
Dimensions:	239 × 239 × 153 mm (H × W × D) : (1530S, 1540S) 239 × 239 × 158 mm (H × W × D) : (1530L, 1540L)
Weight:	3.0 kg

Units and cells

	Louver length (mm)	Brightness (cd/m ²)	Visible angle (H/V)	Remarks
LDU-1530S	7	3000	120 °/u: 30 ° d: 60°	Indoor use Low noise level
LDU-1530L	12	3000	120 °/u: 15 ° d: 40 °	Outdoor use Wide visible angle
LDU-1540S	7	4000	120 °/u: 30 ° d: 60°	Indoor use Low noise level
LDU-1540L	12	4000	120 °/u: 15 ° d: 40 °	Outdoor use Wide visible angle

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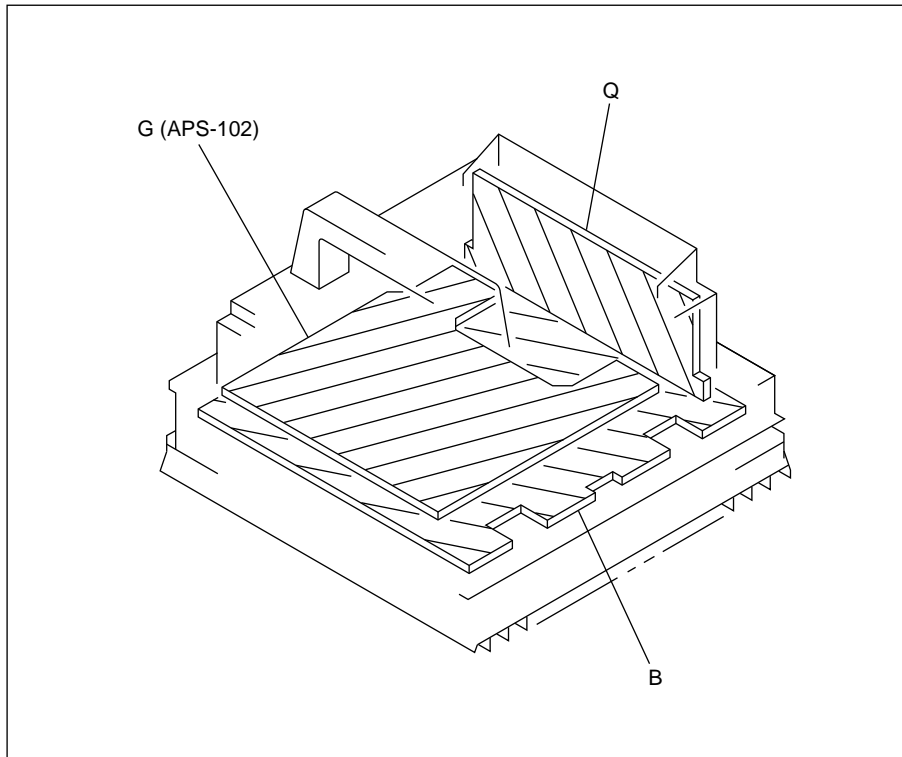
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SECTION 1

SERVICE INFORMATION

1-1. CIRCUIT BOARDS LOCATION



Caution for Static Electricity to LED Cell

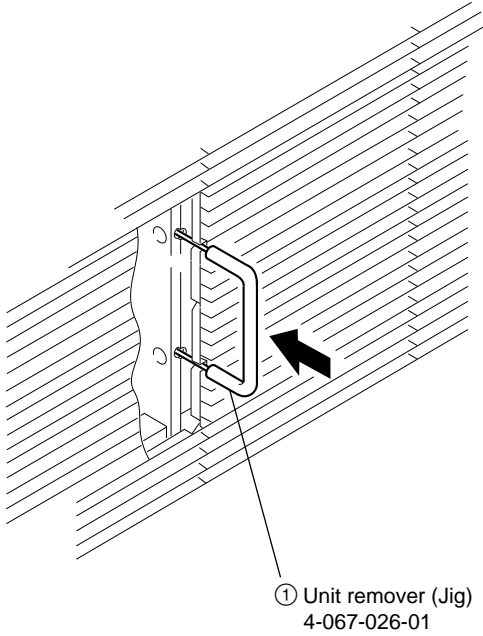
The LED is very weak to static electricity, and a discharge of static electricity could shorten the LED life.

Wear the earth bands when touching the LED or the connector of the LED cell to replace the LED cell or handle the unit.

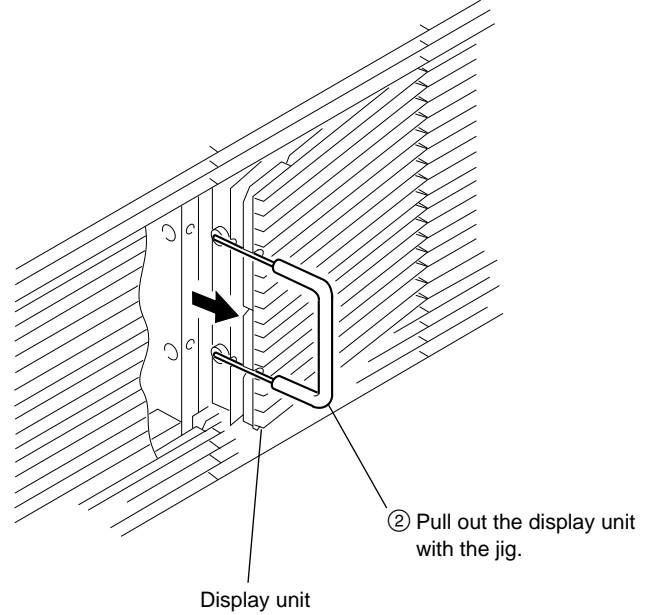
1-2. DISASSEMBLY

1-2-1. Exchanging the Display Unit from the Front Side of the Unit.

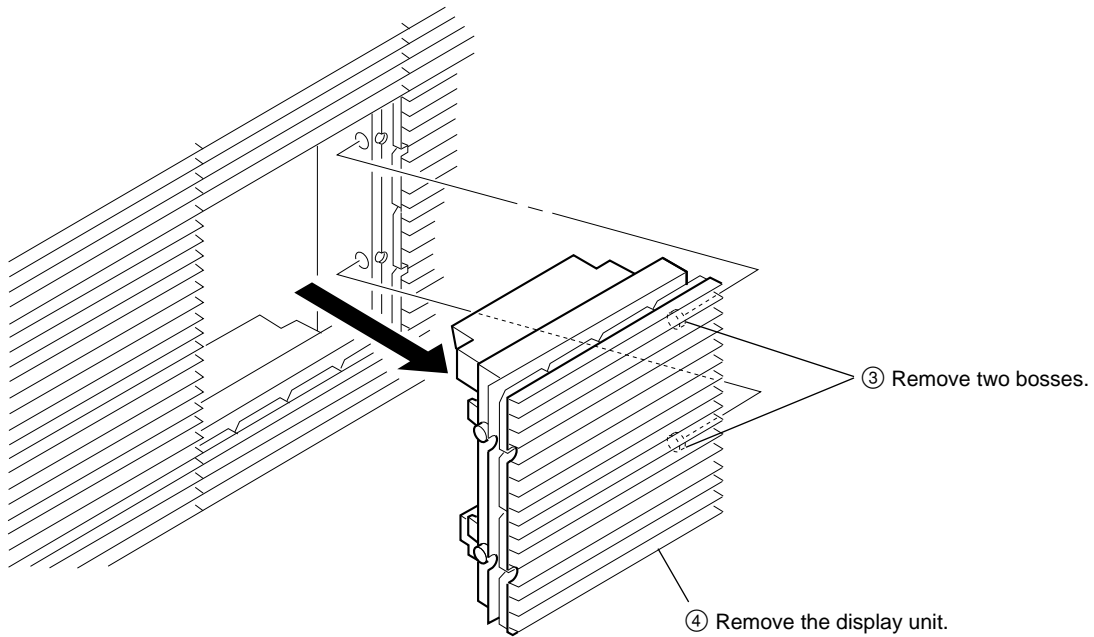
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2.

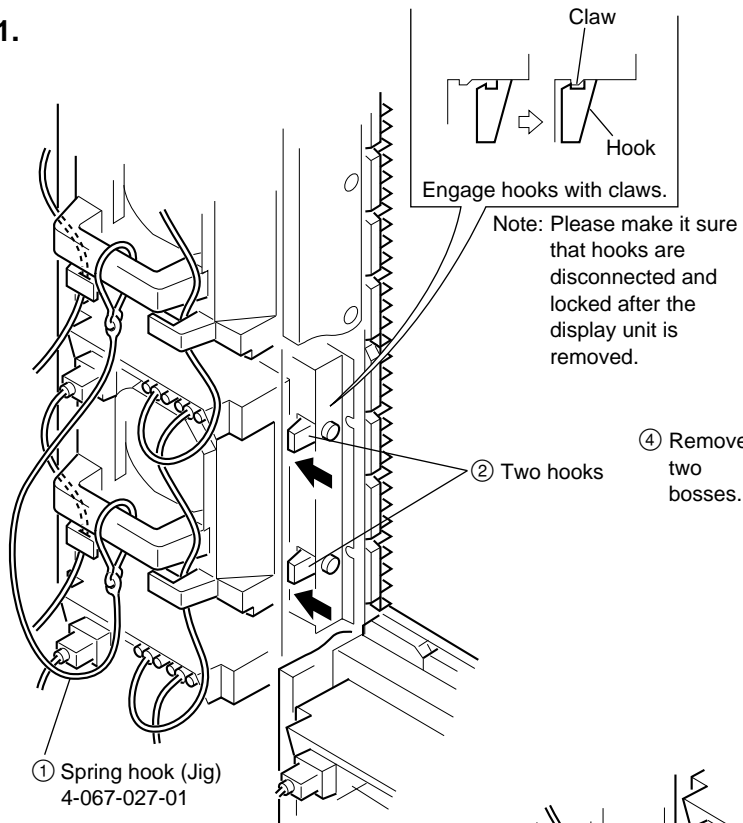


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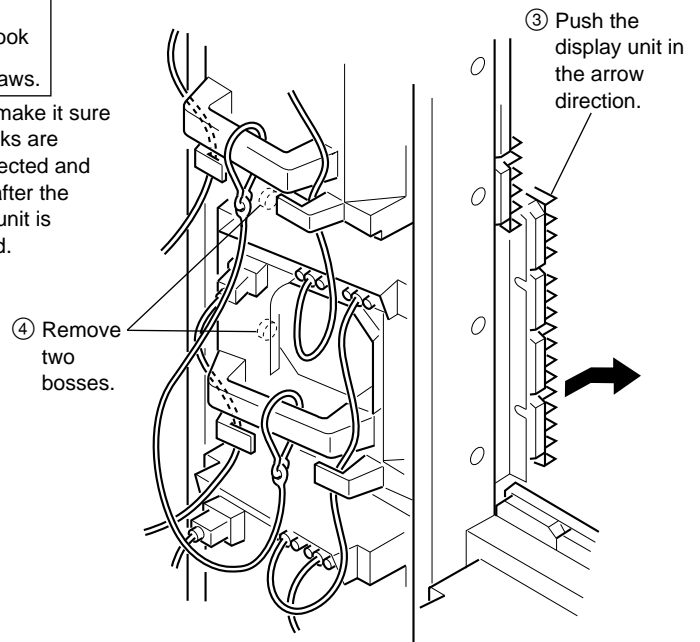


1-2-2. Exchanging the Display Unit from the Behind of the Unit.

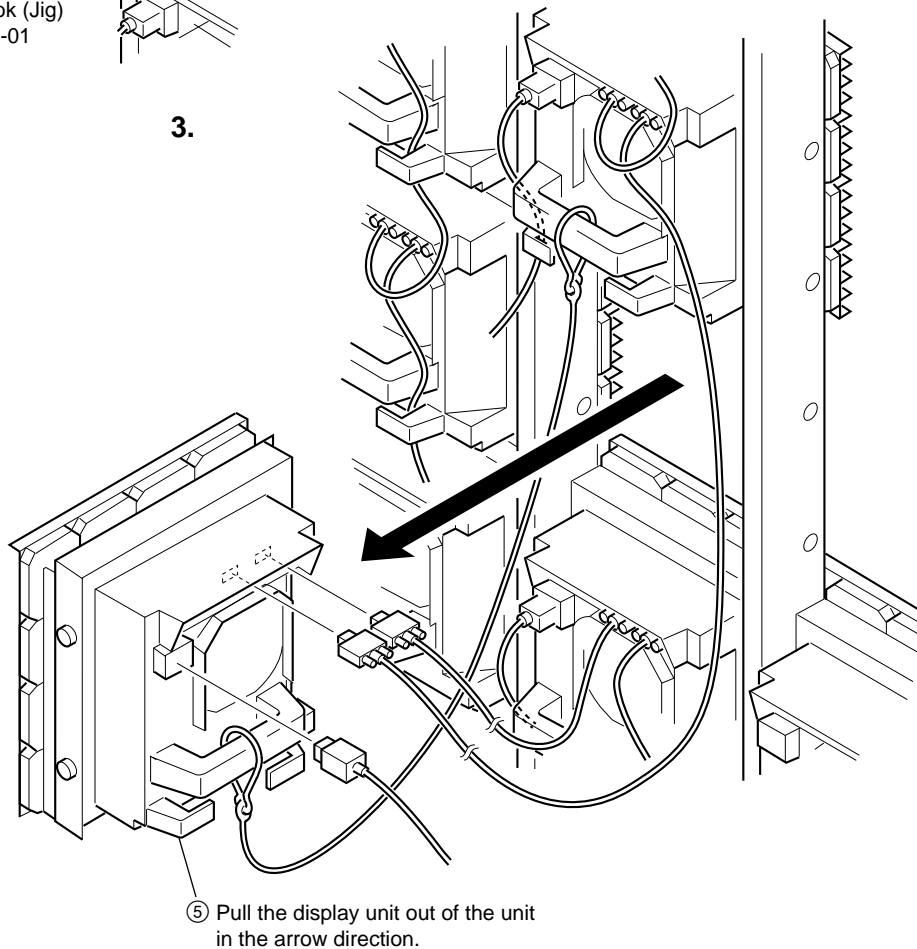
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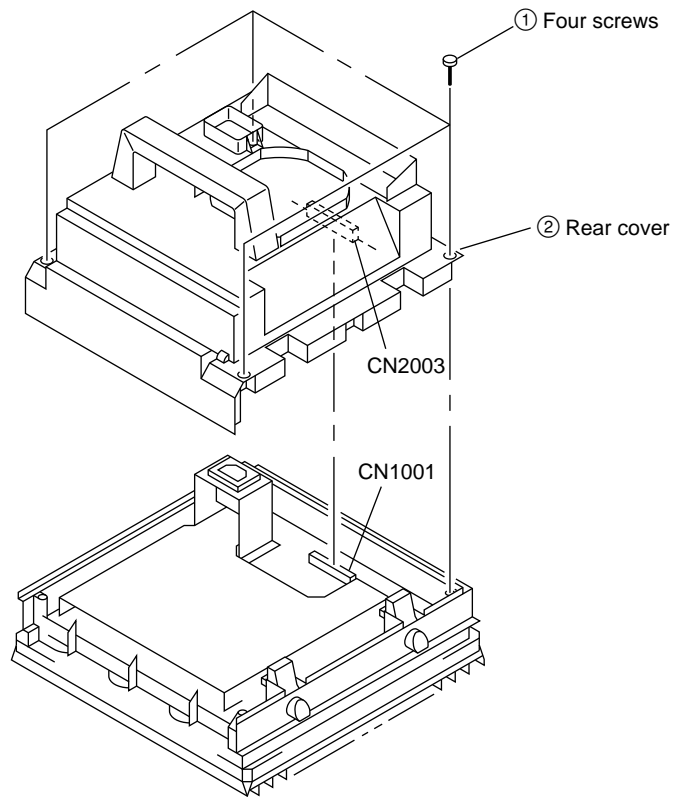
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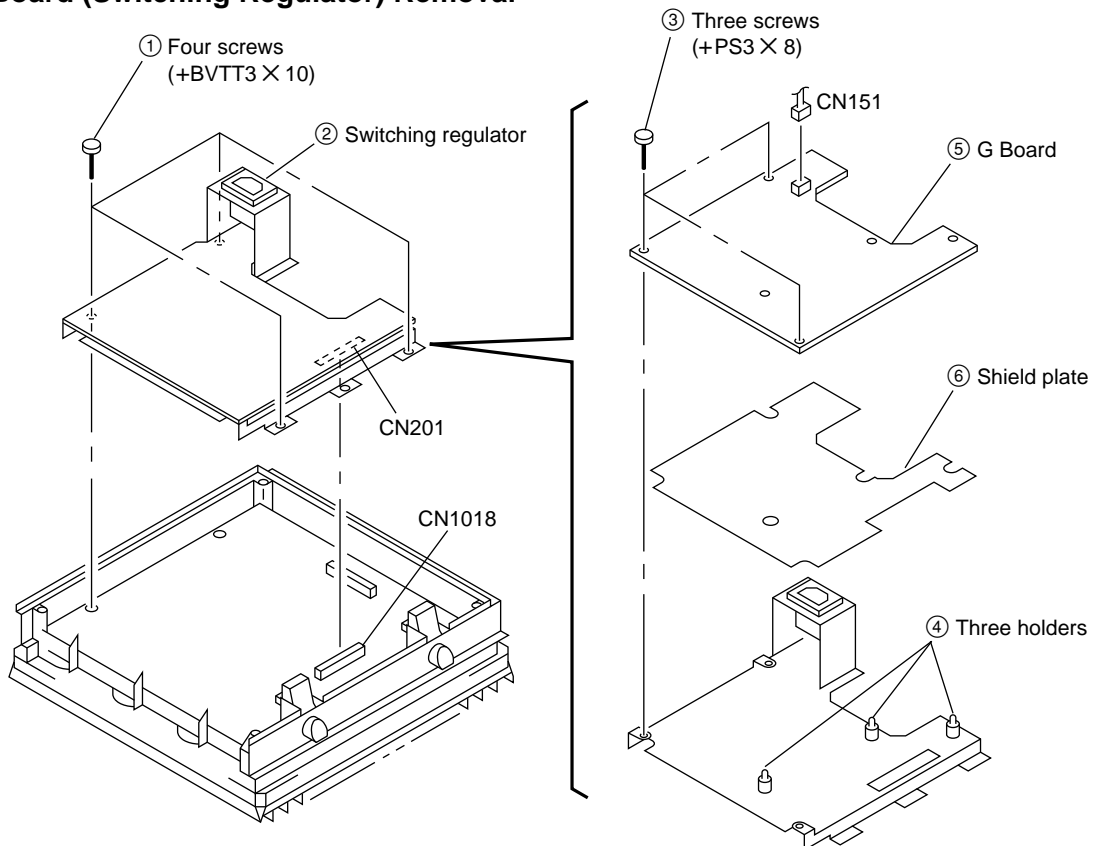
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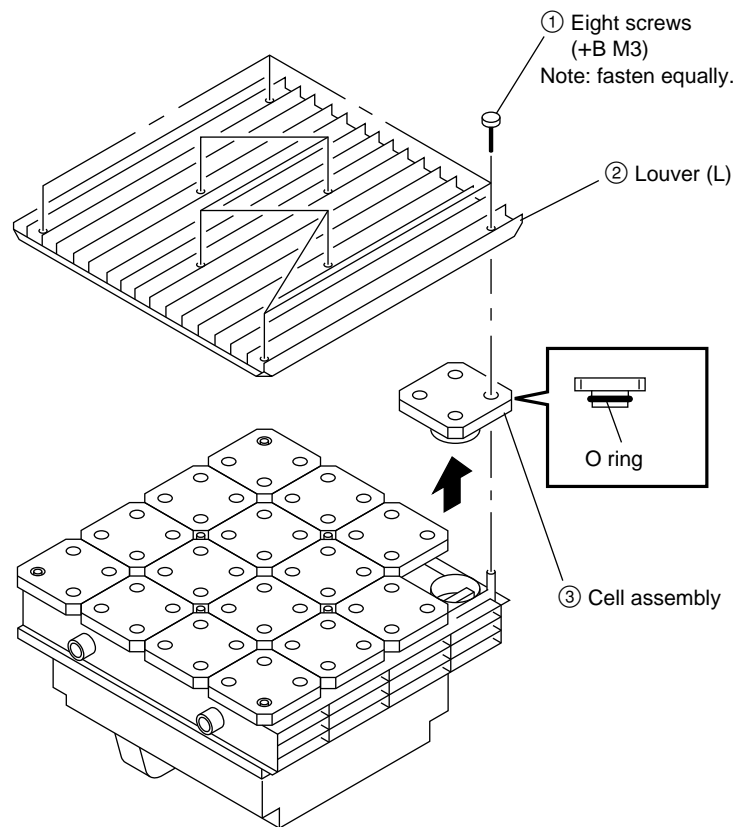
1-2-3. Rear Cover Removal



1-2-4. G Board (Switching Regulator) Removal

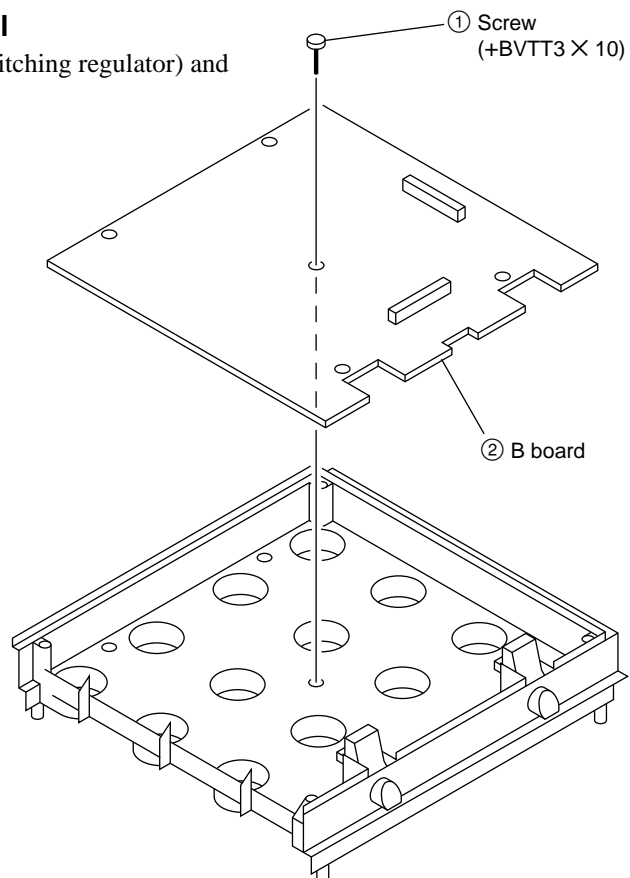


1-2-5. Cell Assembly Removal

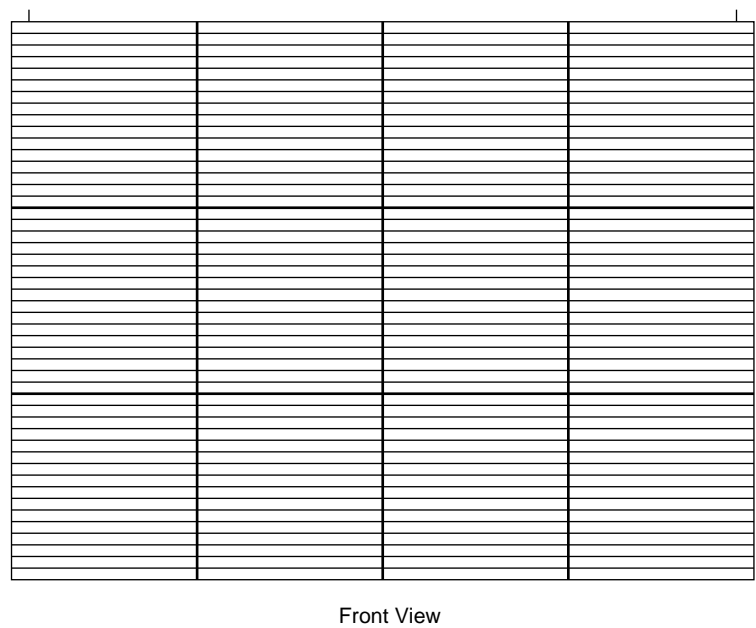
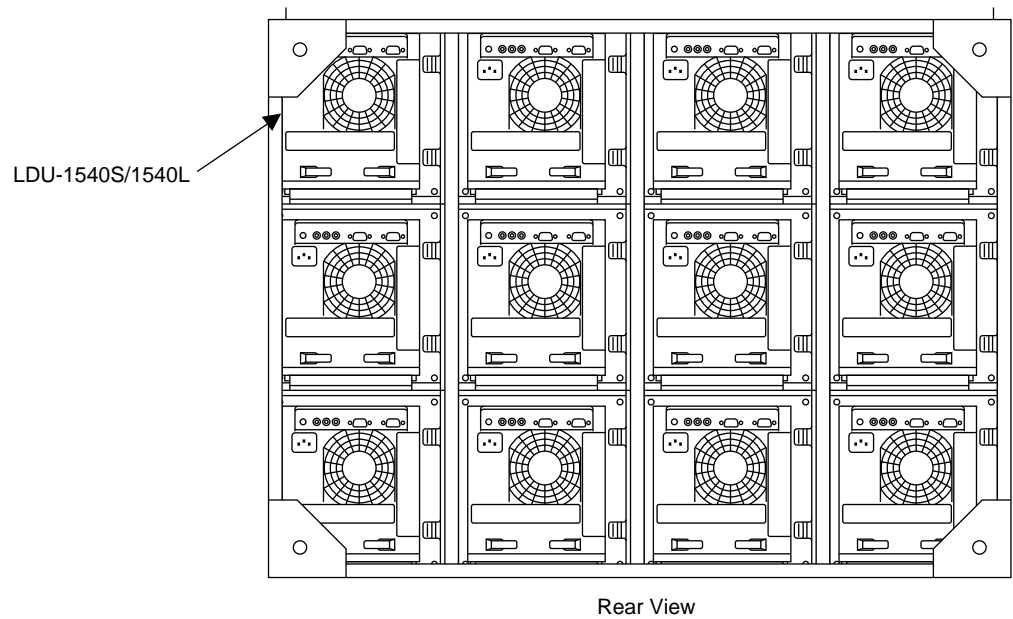


1-2-6. B Board Removal

- Remove the G Board (switching regulator) and cell assembly.



1-2-7. LDM-1540S/1540L Exterior View



Note: On replacing one of the units in the module, each unit is placed in each shelf; the top, the middle and the bottom. In three units, the top one and the bottom one cannot be replaced immediately because the module frame obstructs them. To remove the top or bottom unit, remove the middle unit first and unlock the hooks of the unit to be removed. Then slide it a little bit into the space where the middle one used to be. To install, follow the method in reverse order, that is, slide the unit in the shelf to fix through the space where the middle one used to be. After fixing, put the middle unit back. (Please connect the cable and perform setting of address (3-3(E)).)

SECTION 2 CIRCUIT ADJUSTMENTS

Measuring instrument:

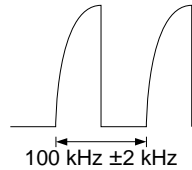
1. Oscilloscope
2. Digital tester
3. DC power supply

G BOARD ADJUSTMENTS

2-1. LOWEST FREQUENCY ADJUSTMENT (RV103)

Apply 18 V between 4 pin (VIN) and 16 pin (GND) of IC103, and check the Q105 gate input waveform with an oscilloscope.

Then, adjust the frequency of gate waveform to $100 \text{ kHz} \pm 2 \text{ kHz}$ with the RV103. (Set oscilloscope to 5 V range)



* Don't turn on Power supply AC.

2-2. POWER FACTOR IMPROVEMENT (PFC) VOLTAGE ADJUSTMENT (RV101)

Power supply AC100 to 240 V, and adjust RV101 so that the voltage at both ends of C111 becomes $380 \pm 5 \text{ V}$. The load mode is the MIN.

2-3. OUTPUT VOLTAGE ADJUSTMENT (RV201)

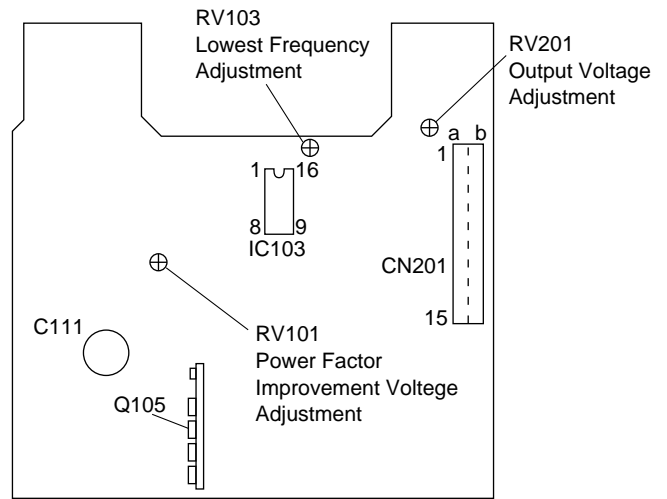
Power supply AC100 to 240 V, and adjust RV201 so that the output voltage of 5.8 V line (CN201 a8-13 pins) becomes $5.80 \pm 0.05 \text{ V}$.

Then, confirm that each line voltage is within the following range.

5.8 V line (CN201 a8-13 pins)	5.75 ~ 5.80 V
4.1 V line (CN201 a3-7 pins)	3.95 ~ 4.35 V
5.0 V line (CN201 a14, 15 pins)	4.80 ~ 5.20 V
12 V line (CN201 a1, 2 pins)	9.8 ~ 12.4 V

The load mode is the MIN.

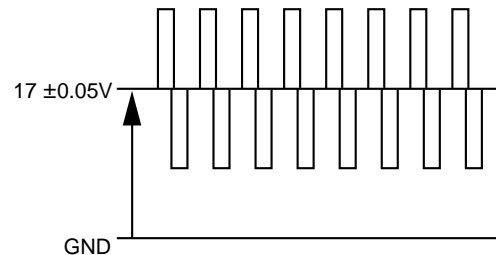
G Board (APS-102)



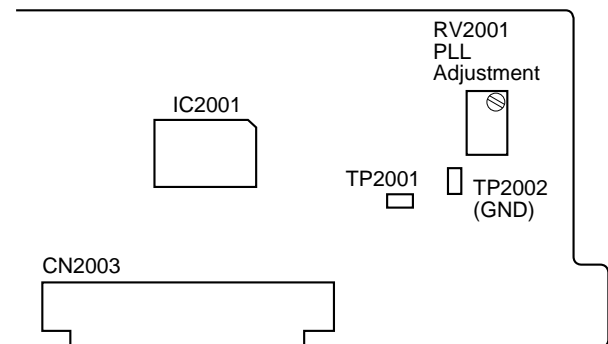
Q BOARD ADJUSTMENT

2-4. PLL ADJUSTMENT (RV2001)

Power supply AC100 to 240 V, connect the oscilloscope with TP2001 and adjust RV2001 so that the center of waveform becomes 1.7 ± 0.05 .



Q Board



SECTION 3 CIRCUIT DESCRIPTIONS

3-1. SIGNAL SYSTEM

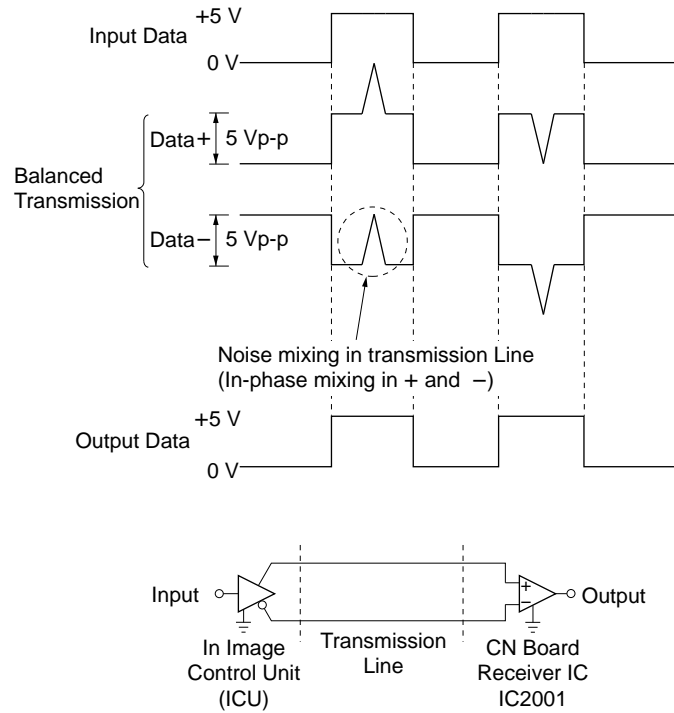


Fig. 1

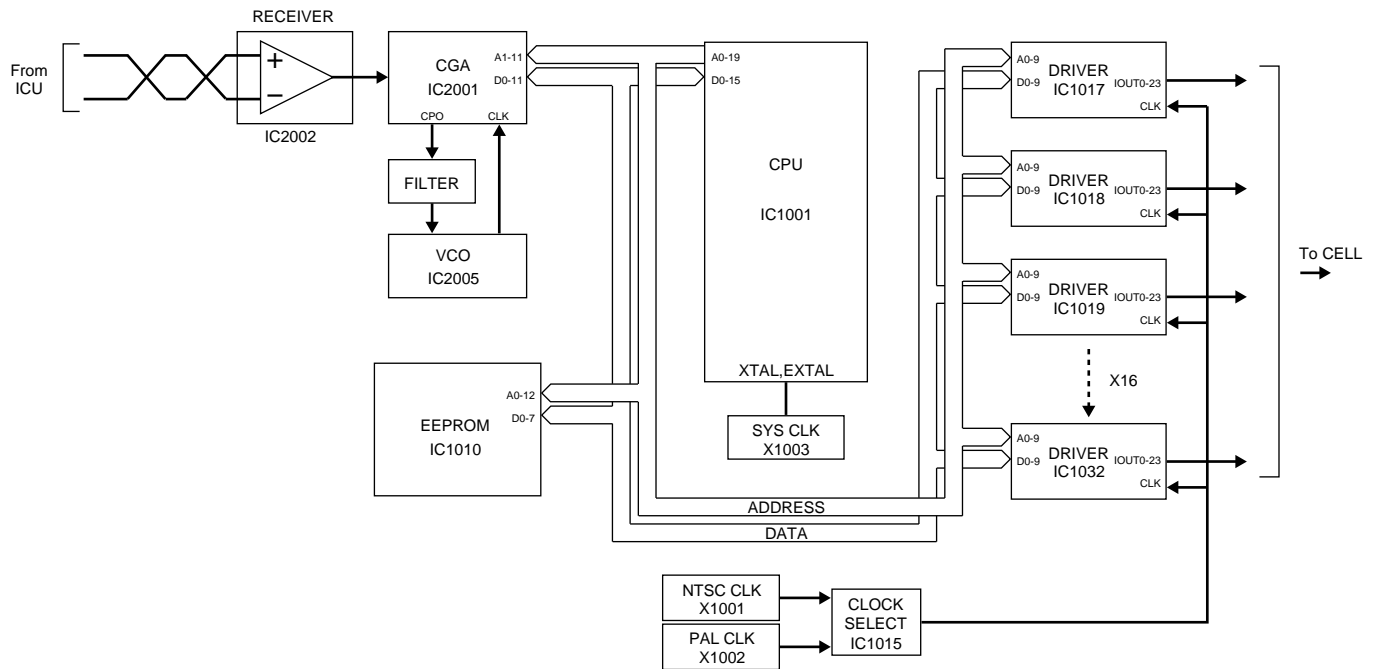


Fig. 2 Signal Block Diagram

The data signals from ICU are input to the IC2001 CGA via IC2002 line receiver on the Q board. A phase comparator is built in the CGA, and the PLL is composed of a combination of filter and IC2005 VCO. A clock component contained in the data from ICU is extracted by this PLL, and it is used as reference clock for CGA. The line address is added to the head of image data, and the CGA makes serial-parallel conversion of only the data that corresponds to the unit ID concerned and takes it in the RAM. The microprocessor IC1001 on the B board sends this data to respective drivers (IC1017 to 1032). Where

PWM modulation is performed to drive the cells. The correction data for each pixel are stored in the IC1010 EEPROM on the B board. The microprocessor always writes these correction data into the RAM in driver ICs on the B board. Based on these correction data, the driver ICs control the current to correct uneven brightness of each device. The clock input to the driver ICs is internally divided according to the brightness level, and it is used as reference clock for PWM modulation.

The correction data stored in the EEPROM are adjustable in the field using the unit alignment controller or screen alignment controller.

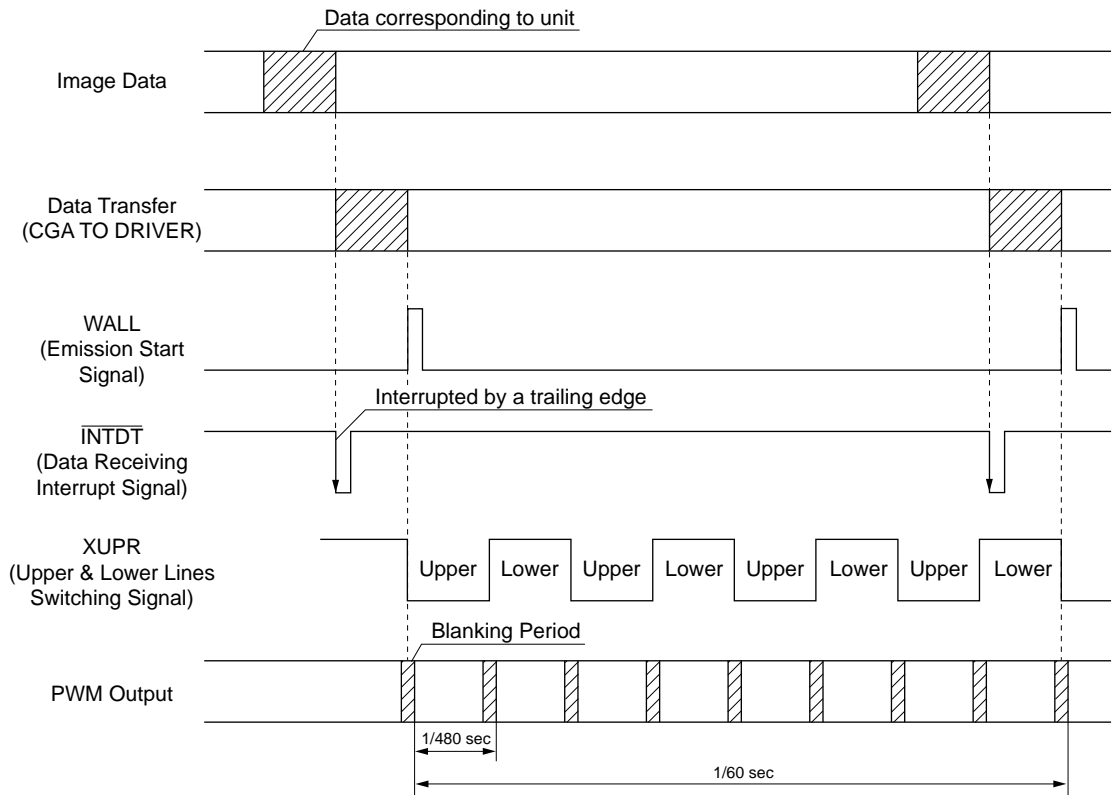


Fig. 3

3-2. ADDRESS SWITCH AND STATUS LED

3-2-1. Address Switch

The function of the signal generator is built in the unit, and it can generate three kinds of signals as listed in Table 1. The signals can be selected with the address switch. The address switch has been set to 001 at the shipment.

Address SW setting (Lower 2 digits)	Output signal	Remarks
*97	Full white signal	
*98	Character signal	Alphabets and numbers are scrolled.
*99	Stair step signal, color bar signal, and blanking signal are scrolled.	

※: Don't care for higher 1 digit.

Table 1

Initial setting of address switch:

In composing the screen, set the address switches of respective unit as follows.

01	01	01	01	01	01	--
02	02	02	02	02	02	--
03	03	03	03	03	03	--
04	04	04	04	04	04	--

3-2-2. Status LED

Specific unit can easily be selected by blinking the LED on the rear of unit using the unit alignment controller or screen alignment controller.

Green	Normal
Red lights up	Alarm
Red blinking	Unit selection

Also, in case of alarm, LED automatically lights up by the self diagnostic function.

4 V Down
6 V Down
12 V Down
Thermal Alarm
Fan Stop

3-2-3. Brightness Adjustment

The brightness (color temperature) can be adjusted for every unit, cell dot, and pixel using the unit alignment controller (JME-UA200), and this value can be stored in the memory. For an adjusting method, refer to the JME-UA200 Instruction Manual.

3-3. POWER SYSTEM

3-3-1. Filter & AC Rectifier Block

After AC inlet, a discharge resistor R101 and a normal mode lightning surge protect varistor VDR101 are arranged. After that, the 2-stage filter is composed of C101/LF101 and LF102/C102, and rectification is done with D101.

3-3-2. PFC Block

After rectification, a boost up converter is composed of Q101, D102, and C110, and the output voltage is maintained to about 380 V (adjusted with RV101) under control of IC101.

The IC101 detects the input current waveform to make the input current similar to the input voltage of the same phase so as to improve the power factor.

When the power is turned on, the power is supplied from R153, R154, then after the power supply block started to operate, the power is supplied from D105 and R117 of the T101 tertiary winding.

As for the overvoltage, etc. caused by alarms in the PFC control system, the double protection circuit of restriction by IC102 (5, 6, 7 pins) and latch through detection by IC103 is provided. The PFC output voltage is set to about 380 V with RV101.

Also for the overvoltage or overcurrent caused by alarms in the PFC control system, the protection circuit operates through monitoring by the IC103.

3-3-3. Power Supply Block

Basic circuit composition is the 2-crystal current resonance circuit consisting of Q104 and 105. Using C117 and T101 primary winding leakage inductance, the resonance system is made up to perform zero current switching. By the switching, the output of IC103 OUT 1, 2 pins is transmitted to the respective drive circuits for Q104 and 105 via T102 drive transformer. The control system is a

frequency control system, where the output voltage is controlled to constant level by varying the RT2 terminal via PH101.

3-3-4. OTP (Temperature Protection) Circuit

This circuit consists of THP101 and Q106 attached to the heat sink, and when the heat sink temperature rises over 110fC, THP101 opens, IC103 OVP terminal (6 pin) becomes “H”, IC101 is latched, and the switching of power supply block stops. To reset, turn off the AC and allow time for about one minute so as to lower the IC103 Vin terminal (4 pin) to 12 V or less.

3-3-5. Output Voltages

5.8 V Output

After output from the T101 secondary winding terminal, the power is rectified at D204 and 205, and a ripple component is reduced by a π type filter, then the voltage is output from the output terminal CN201 a8-13 pins. The output voltage is detected by the operation amplifier of IC202 5, 6, 7 pins, then it is returned to the IC103 12 pin via PH101 so as to be stabilized through the frequency control system. Both 5.8 V and 4.1 V are adjusted with RV201. Also, by detecting the voltage at both ends of L204, if the current in 5.8 V line is taken about 12 A or more, Q202 turns on via D215 and 214, PH102 operates, IC103 OVP terminal (6 pin) becomes “H”, IC101 is latched, and the switching of power supply block stops. To reset, turn off the AC and allow time for about one minute so as to lower the IC103 Vin terminal (4 pin) to 12V or less.

5.0 V Output

As for the 5 V output, the power is branched prior to L204 for 5.8 V output, and it is controlled to 5 V by 4-pin regulator IC201 having low saturation, then output from the output terminal CN201 a14-15 pins.

4.1 V Output

After output from the T101 secondary winding terminal, the 4.1 V power is supplied from D206 and magnetic amplifier consisting of L201 and 202. A ripple component is reduced by a π type filter, then the voltage is output from the output terminal CN201 a3-7 pins. The output

voltage is detected by the operation amplifier of IC202 8, 9, 10 pins, then it is returned to the magnetic amplifier via Q201 so as to be stabilized.

Also, by detecting the voltage at both ends of L206 with IC202 12, 13, 14 pins, if the current in 4.1 V line is taken about 14 A or more, Q202 turns on via D215 and 214, PH102 operates, IC103 OVP terminal (6 pin) becomes “H”, IC101 is latched, and the switching of power supply block stops. To reset, turn off the AC and allow time for about one minute so as to lower the IC103 Vin terminal (4 pin) to 12 V or less.

12 V Output

After output from the T101 secondary winding terminal, the 12 V is output from the double voltage circuit composing of C201, 202, and D202, 203, 209, 210 using the 5.8 V line. After that, it is branched into two lines; in one line, a ripple component is reduced by a π type filter, then it becomes Vcc for the circuit system on the secondary side, and in another line, the voltage is output from the output terminal CN201 a1-2 pins through the TH201 for current restriction.

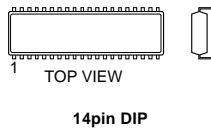
3-3-6. OVP Circuit

The 5.8 V and 4.1 V output voltages are monitored by Zener diode D212 and 211, and if overvoltage occurs, Q202 turns on via D215 and 214, PH102 operates, IC103 OVP terminal (6 pin) becomes “H”, IC101 is latched, and the switching of power supply block stops. To reset, turn off the AC and allow time for about one minute so as to lower the IC103 Vin terminal (4 pin) to 12 V or less.

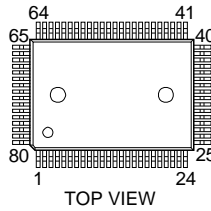
SECTION 4

SEMICONDUCTORS

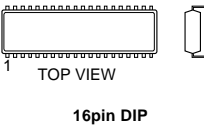
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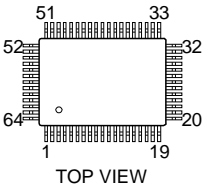
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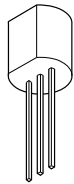
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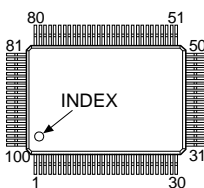
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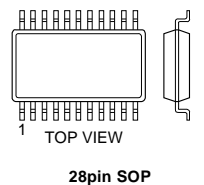
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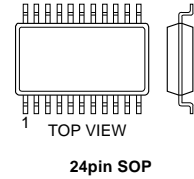
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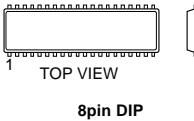
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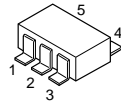
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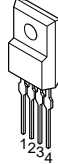
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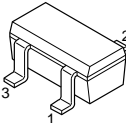
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NC7S32M5X**



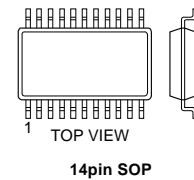
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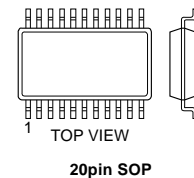
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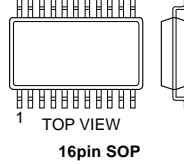
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SN74HC04APW-E05
SN74HC14APW-E05**



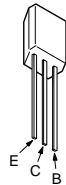
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SN74HC541ANS-E05
SN74HC541APW-E05**



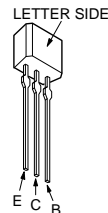
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SN75C1167NS-E05**



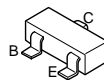
**DTA114ESA-TP
2SA1175TP-F
2SA1175TP-H
2SA1175TP-J
2SC2785TP-F
2SC2785TP-H
2SC2785TP-J**



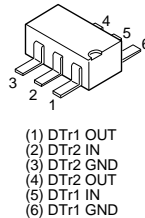
**DTC114ESA-TP
2SD1858-Q-TV2
2SD1858-R-TV2**



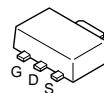
DTD143EK-T-146



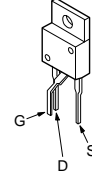
UMB11-TN



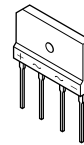
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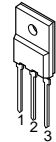
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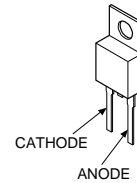
D3SB60F



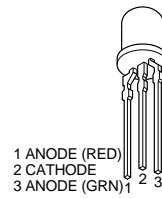
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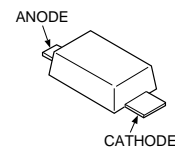
FSF05A60



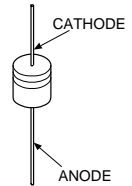
GL-5ED5



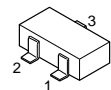
RB051L-40TE25



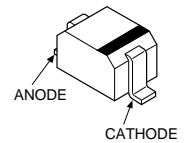
**RB441Q-40-40T-72
RD13ES-T1B1
RD4.3ES-T1B
RD4.7ES-T1B1
RD6.8ES-T1B1
1SS119-25TD
1SS133T-77**



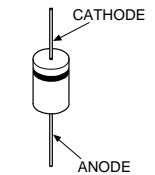
1SS123



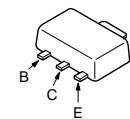
1SS355TE-17



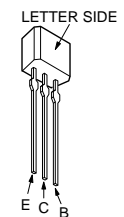
11EQS10-TA1



2SB1308-T101-QR



2SB810TP-J



SECTION 5

EXPLODED VIEWS

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified △ marked are critical for safety.
Replace only with the part number specified.

Les composants identifiés par la marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

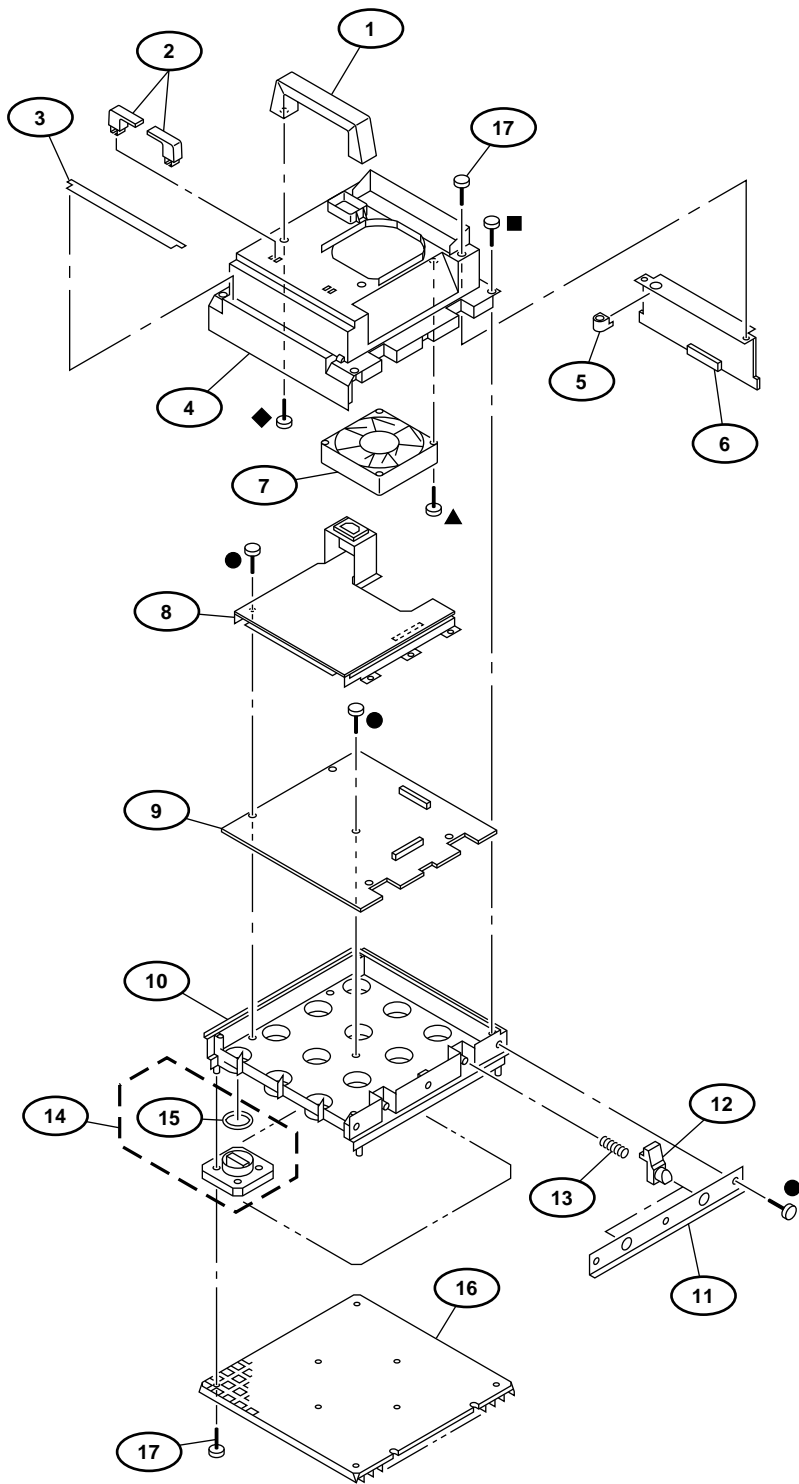
【使用上の注意】

- * 印の部品は常時在庫しておりません。
受注して供給できるまで日数を要します。
- 分解図中の構成部品で、図面番号のない部品は供給しません。
- 組立部品の構成部品は備考欄に図面番号で示します。

△印の部品は、安全性を維持するために、重要な部品です。従って交換時は、必ず指定の部品を使用してください。

5-1. CHASSIS

- : 7-685-647-99 +BVTT3x10
- : 7-685-663-99 +BVTT4x16
- ▲ : 7-682-968-09 +PSW4x30
- ◆ : 7-682-974-19 +PSW6x10



Rf.No.	Part No.	Description	Remark	Rf.No.	Part No.	Description	Remark
1	*4-063-312-01	HANDLE		10	*4-063-307-02	CABINET	
2	4-316-003-00	HOLDER, CORD		11	*4-063-314-01	STOPPER	
3	*4-064-806-02	PLATE, VALVE		12	4-063-309-01	BRACKET, UNIT	
4	*4-063-308-02	COVER, REAR		13	4-063-319-01	SPRING, COMPRESSION	
5	*4-063-315-01	LAMP COVER		14	A-1501-301-A	CELL ASSY	15
6	*A-1275-156-AQ	BOARD, COMPLETE		15	4-063-316-01	ORING	
7	1-698-787-11	FAN, DC (92 SQUARE)		16	4-063-310-01	LOUVER (LDU-1530S/1540S:7mm)	
8	1-468-298-11	REGULATOR, SWITCHING		16	4-063-311-01	LOUVER (LDU-1530L/1540L:12mm)	
9	*A-1135-946-AB	BOARD, COMPLETE		17	4-064-851-01	SCREW (+B M3)	

SECTION 6

ELECTRICAL PARTS LIST

NOTE:

The components identified \triangle marked are critical for safety.
Replace only with the part number specified.

Les composants identifiés par la marque \triangle sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

• All resistors are in ohms
• F : nonflammable

CAPACITORS

PF : $\mu\mu\text{F}$

• There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

【使用上の注意】

\triangle 印の部品は、安全性を維持するために、重要な部品です。従って交換時は、必ず指定の部品を使用してください。

お願い

図面番号で部品を指定するときは、基板名又はブロックを併せて指定して下さい。

• 抵抗の単位 Ω は省略してあります。

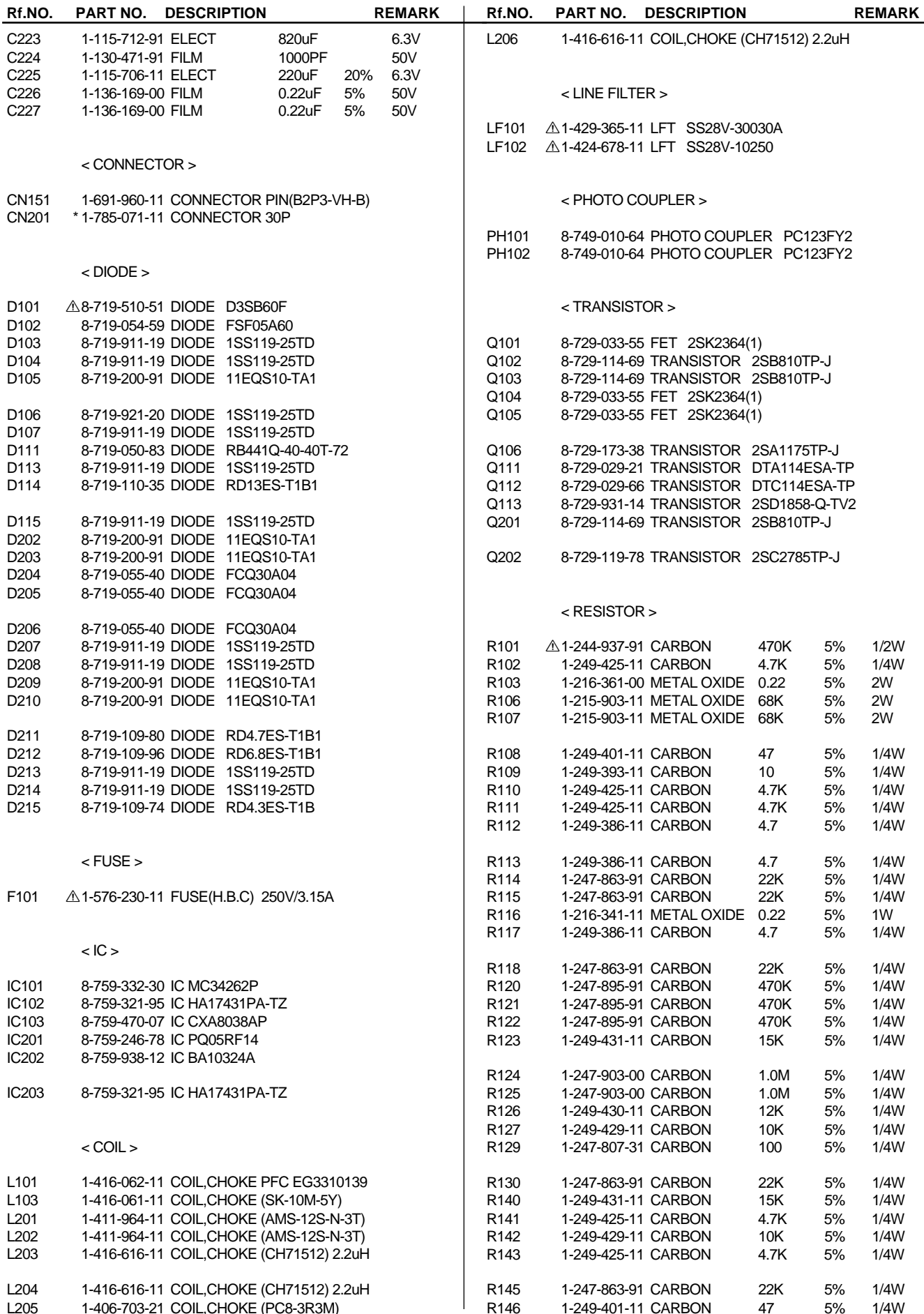
参考欄のFは不燃性抵抗を示します。

• * 印の部品は常時在庫しておりません。

• ここに記載されている部品は、補修部品であるため、回路図及びセットについている部品と異なる場合があります。

• 基板どうしでリファレンスNo.が重複している場合がありますので発注の際には必ず基板名を明記して下さい。

Rf.NO.	PART NO.	DESCRIPTION	REMARK	Rf.NO.	PART NO.	DESCRIPTION	REMARK
	1-468-298-11	G (APS-102) REGULATOR SWITCHING *****		C133	1-117-975-91	CERAMIC 330PF	50V
				C134	1-130-475-91	FILM 2200PF	50V
	1-533-217-31	FUSE HOLDER		C135	1-130-467-00	FILM 470PF 5%	50V
	7-682-648-09	SCREW +PS3X8 (SWCH.CZN-N)		C136	1-130-471-91	FILM 1000PF	50V
	7-682-661-09	SCREW M4X8		C137	1-130-483-00	FILM 0.01uF 5%	50V
	7-685-646-79	SCREW +BV3X8 TYPE2 IT3B		C138	1-136-165-00	FILM 0.1uF 5%	50V
				C139	1-136-165-00	FILM 0.1uF 5%	50V
	< CAPACITOR >			C140	1-136-165-00	FILM 0.1uF 5%	50V
C101	\triangle 1-117-916-51	FILM 0.22uF 20%	250V	C141	1-136-165-00	FILM 0.1uF 5%	50V
C102	\triangle 1-117-916-51	FILM 0.22uF 20%	250V	C142	1-136-165-00	FILM 0.1MF 5%	50V
C103	\triangle 1-113-920-91	CERAMIC 2200PF 20%		C143	1-107-903-11	ELECT 2.2uF 20%	50V
C104	\triangle 1-113-920-91	CERAMIC 2200PF 20%		C144	1-130-471-91	FILM 1000PF	50V
C106	\triangle 1-113-920-91	CERAMIC 2200PF 20%		C201	1-136-177-00	FILM 1.0uF 5%	50V
C107	\triangle 1-117-583-11	FILM 1.0uF	450V	C202	1-136-177-00	FILM 1.0uF 5%	50V
C108	1-110-506-51	FILM 0.47uF 10%	450V	C203	1-115-737-11	ELECT 1000uF 20%	10V
C109	1-117-583-11	FILM 1.0uF	450V	C204	1-115-737-11	ELECT 1000uF 20%	10V
C110	1-117-583-11	FILM 1.0uF	450V	C205	1-115-802-11	ELECT 56uF 20%	50V
C111	1-110-970-11	ELECT 150uF 20%	450V	C206	1-115-756-11	ELECT 270uF 20%	16V
C113	1-130-467-00	FILM 470PF 5%	50V	C207	1-115-747-31	ELECT 6800uF	10V
C114	1-130-467-00	FILM 470PF 5%	50V	C208	1-115-747-31	ELECT 6800uF	10V
C115	1-130-471-91	FILM 1000PF	50V	C209	1-136-165-00	FILM 0.1MF 5%	50V
C116	1-130-471-91	FILM 1000PF	50V	C210	1-115-737-11	ELECT 1000uF 20%	10V
C117	1-113-504-11	FILM 0.0082uF 700V		C211	1-115-737-11	ELECT 1000uF 20%	10V
C118	1-115-802-11	ELECT 56uF 20%	50V	C213	1-130-483-00	FILM 0.01uF 5%	50V
C119	1-115-802-11	ELECT 56uF 20%	50V	C214	1-136-165-00	FILM 0.1MF 5%	50V
C120	1-130-471-91	FILM 1000PF	50V	C215	1-107-906-11	ELECT 10uF 20%	50V
C122	1-136-165-00	FILM 0.1uF 5%	50V	C216	1-136-165-00	FILM 0.1MF 5%	50V
C123	1-107-910-11	ELECT 100uF 20%	35V	C217	1-136-169-00	FILM 0.22uF 5%	50V
C124	1-130-483-00	FILM 0.01uF 5%	50V	C218	1-130-483-00	FILM 0.01uF 5%	50V
C125	1-136-169-00	FILM 0.22uF 5%	50V	C219	1-136-165-00	FILM 0.1MF 5%	50V
C126	1-130-471-91	FILM 1000PF	50V	C220	1-136-165-00	FILM 0.1MF 5%	50V
				C221	1-115-712-91	ELECT 820uF	6.3V



Rf.NO.	PART NO.	DESCRIPTION	REMARK	Rf.NO.	PART NO.	DESCRIPTION	REMARK
R147	1-249-417-11	CARBON	1.0K 5% 1/4W	< VARISTOR >			
R148	1-249-406-11	CARBON	120 5% 1/4W	VDR101	△ 1-808-927-22	VARISTOR NV470D10-TB2	
R149	1-249-421-11	CARBON	2.2K 5% 1/4W	VDR102	△ 1-809-909-22	VARISTOR NV270D03-TB2	
R150	1-247-807-31	CARBON	100 5% 1/4W	*****			
R151	1-247-863-91	CARBON	22K 5% 1/4W	* A-1135-946-A B COMPL			
R152	1-249-417-11	CARBON	1.0K 5% 1/4W	*****			
R153	1-215-903-11	METAL OXIDE	68K 5% 2W	CNI101	1-251-047-11	SOCKET, IC	
R154	1-215-903-11	METAL OXIDE	68K 5% 2W	<CAPACITOR>			
R155	1-247-807-31	CARBON	100 5% 1/4W	C1001	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
R156	1-247-903-00	CARBON	1.0M 5% 1/4W	C1002	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
R157	1-247-903-00	CARBON	1.0M 5% 1/4W	C1003	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
R158	1-247-863-91	CARBON	22K 5% 1/4W	C1004	1-107-682-11	CERAMIC CHIP 1MF 10% 16V	
R159	1-247-863-91	CARBON	22K 5% 1/4W	C1005	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
R160	1-249-421-11	CARBON	2.2K 5% 1/4W	C1006	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R201	1-247-807-31	CARBON	100 5% 1/4W	C1007	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
R202	1-247-807-31	CARBON	100 5% 1/4W	C1008	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
R203	1-247-815-91	CARBON	220 5% 1/4W	C1009	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
R204	1-247-807-31	CARBON	100 5% 1/4W	C1011	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
R206	1-249-425-11	CARBON	4.7K 5% 1/4W	C1012	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
R207	1-249-417-11	CARBON	1.0K 5% 1/4W	C1013	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R208	1-247-807-31	CARBON	100 5% 1/4W	C1014	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R209	1-247-815-91	CARBON	220 5% 1/4W	C1015	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R210	1-247-807-31	CARBON	100 5% 1/4W	C1016	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R211	1-249-429-11	CARBON	10K 5% 1/4W	C1017	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R212	1-215-433-00	METAL	3.3K 1% 1/4W	C1018	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R213	1-215-420-00	METAL	910 1% 1/4W	C1019	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R215	1-215-437-00	METAL	4.7K 1% 1/4W	C1020	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R216	1-215-437-00	METAL	4.7K 1% 1/4W	C1021	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R217	1-249-417-11	CARBON	1.0K 5% 1/4W	C1022	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R218	1-249-429-11	CARBON	10K 5% 1/4W	C1023	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R219	1-249-429-11	CARBON	10K 5% 1/4W	C1024	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R220	1-249-417-11	CARBON	1.0K 5% 1/4W	C1025	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R221	1-247-807-31	CARBON	100 5% 1/4W	C1026	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R222	1-247-807-31	CARBON	100 5% 1/4W	C1027	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R223	1-249-421-11	CARBON	2.2K 5% 1/4W	C1028	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R224	1-249-425-11	CARBON	4.7K 5% 1/4W	C1029	1-164-690-91	CERAMIC CHIP 0.0022MF 5% 50V	
R225	1-249-425-11	CARBON	4.7K 5% 1/4W	C1030	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
R226	1-249-425-11	CARBON	4.7K 5% 1/4W	C1031	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
R228	1-249-421-11	CARBON	2.2K 5% 1/4W	C1032	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
R229	1-249-425-11	CARBON	4.7K 5% 1/4W	C1033	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
R230	1-249-425-11	CARBON	4.7K 5% 1/4W	C1034	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
R231	1-249-429-11	CARBON	10K 5% 1/4W	C1035	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
R232	1-249-441-11	CARBON	100K 5% 1/4W	C1036	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
< VARIABLE RESISTOR >				C1037	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
RV101	1-241-763-11	ADJ.CARBON	4.7K	C1038	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
RV103	1-241-764-11	ADJ.CARBON	10K	C1039	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
RV201	1-241-763-11	ADJ.CARBON	4.7K	C1040	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
<TRANSFORMER >				C1041	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
T101	△ 1-431-771-11	TRANSFORMER, CVT FEE40M AL23		C1042	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
T102	1-426-931-11	TRANSFORMER, DT U070304Z		C1043	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
< THERMISTOR >				C1044	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
TH101	1-810-965-11	THERMISTOR 5D-11		C1045	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
TH201	1-801-829-11	THERMISTOR (PTH8L07BA0R9M)		C1046	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
TH202	1-801-829-11	THERMISTOR (PTH8L07BA0R9M)		C1047	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
THP101	1-809-789-71	THERMISTOR		C1048	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	
				C1049	1-115-339-11	CERAMIC CHIP 0.1MF 10% 50V	

Rf.NO.	PART NO.	DESCRIPTION	REMARK		Rf.NO.	PART NO.	DESCRIPTION	REMARK	
C1050	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1112	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1051	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1113	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1052	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1114	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1053	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1115	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1054	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1116	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1055	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1117	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1056	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1118	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1057	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1119	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1058	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1120	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1059	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1121	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1060	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1122	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1061	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1123	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1064	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1124	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1065	1-126-204-11	ELECT CHIP 47MF	20%	16V	C1125	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1066	1-126-204-11	ELECT CHIP 47MF	20%	16V	C1126	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1067	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1127	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1068	1-126-204-11	ELECT CHIP 47MF	20%	16V	C1128	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1069	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1129	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1070	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1130	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1071	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1131	1-126-204-11	ELECT CHIP 47MF	20%	16V
C1072	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1132	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V
C1073	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	C1133	1-126-204-11	ELECT CHIP 47MF	20%	16V
C1074	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	<CONNECTOR>				
C1075	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1001	1-691-855-11	CONNECTOR, BOARD TO BOARD 60P		
C1076	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1002	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1077	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1003	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1078	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1004	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1079	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1005	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1080	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1006	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1081	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1007	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1082	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1008	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1083	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1009	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1084	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1010	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1085	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1011	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1086	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1012	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1087	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1013	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1088	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1014	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1089	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1015	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1090	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1016	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1091	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1017	* 1-785-137-11	SOCKET, CONNECTOR (RECEPTACLE)		
C1092	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	CN1018	1-785-084-11	RECEPTACLE,MULTI CONNECTOR30P		
C1093	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	<DIODE>				
C1094	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	D1001	8-719-066-98	DIODE RB051L-40TE25		
C1095	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	<FILTER>				
C1096	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	FL1001	1-239-903-11	FILTER, CHIP EMI		
C1097	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	FL1002	1-414-551-11	FERRITE 0UH		
C1098	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	FL1003	1-414-551-11	FERRITE 0UH		
C1099	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	FL1004	1-414-551-11	FERRITE 0UH		
C1100	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	FL1005	1-414-551-11	FERRITE 0UH		
C1101	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	FL1006	1-239-903-11	FILTER, CHIP EMI		
C1102	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	FL1007	1-239-899-21	FILTER, CHIP EMI		
C1103	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	FL1008	1-239-899-21	FILTER, CHIP EMI		
C1104	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	FL1009	1-239-899-21	FILTER, CHIP EMI		
C1105	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V	FL1010	1-239-899-21	FILTER, CHIP EMI		
C1106	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V					
C1107	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V					
C1108	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V					
C1109	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V					
C1110	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V					
C1111	1-115-339-11	CERAMIC CHIP 0.1MF	10%	50V					

Rf.NO.	PART NO.	DESCRIPTION	REMARK	Rf.NO.	PART NO.	DESCRIPTION	REMARK
FL1011	1-239-899-21	FILTER, CHIP EMI		IC1029	8-752-083-82	IC CXA2108Q	
FL1012	1-239-899-21	FILTER, CHIP EMI		IC1030	8-752-083-82	IC CXA2108Q	
FL1013	1-239-899-21	FILTER, CHIP EMI					
FL1014	1-239-899-21	FILTER, CHIP EMI		IC1031	8-752-083-82	IC CXA2108Q	
FL1015	1-239-899-21	FILTER, CHIP EMI		IC1032	8-752-083-82	IC CXA2108Q	
				IC1033	8-759-471-76	IC NC7S32M5X	
FL1016	1-239-899-21	FILTER, CHIP EMI		IC1034	8-759-049-58	IC SN74HC04APW-E05	
FL1017	1-239-899-21	FILTER, CHIP EMI		IC1035	8-759-049-80	IC SN74HC541APW-E05	
FL1018	1-239-899-21	FILTER, CHIP EMI					
FL1019	1-239-899-21	FILTER, CHIP EMI		IC1036	8-759-050-36	IC SN74HC540APW-E05	
FL1020	1-239-899-21	FILTER, CHIP EMI		IC1037	8-759-049-80	IC SN74HC541APW-E05	
				IC1038	8-759-050-36	IC SN74HC540APW-E05	
FL1021	1-239-899-21	FILTER, CHIP EMI		IC1039	8-759-049-80	IC SN74HC541APW-E05	
FL1022	1-239-899-21	FILTER, CHIP EMI		IC1040	8-759-049-80	IC SN74HC541APW-E05	
FL1023	1-239-899-21	FILTER, CHIP EMI					
FL1024	1-239-899-21	FILTER, CHIP EMI					
FL1025	1-239-899-21	FILTER, CHIP EMI		IC1041	8-759-049-80	IC SN74HC541APW-E05	
FL1026	1-239-899-21	FILTER, CHIP EMI				<TRANSISTOR>	
FL1027	1-239-899-21	FILTER, CHIP EMI					
FL1028	1-239-899-21	FILTER, CHIP EMI		Q1001	8-729-904-72	TRANSISTOR DTD143EK	
FL1029	1-239-899-21	FILTER, CHIP EMI		Q1002	8-729-015-55	TRANSISTOR 2SJ197-T1	
FL1030	1-239-899-21	FILTER, CHIP EMI		Q1003	8-729-015-55	TRANSISTOR 2SJ197-T1	
				Q1004	8-729-015-55	TRANSISTOR 2SJ197-T1	
FL1031	1-239-899-21	FILTER, CHIP EMI		Q1005	8-729-015-55	TRANSISTOR 2SJ197-T1	
FL1032	1-239-899-21	FILTER, CHIP EMI					
FL1033	1-239-899-21	FILTER, CHIP EMI		Q1006	8-729-015-55	TRANSISTOR 2SJ197-T1	
FL1034	1-239-899-21	FILTER, CHIP EMI		Q1007	8-729-015-55	TRANSISTOR 2SJ197-T1	
FL1035	1-239-899-21	FILTER, CHIP EMI		Q1008	8-729-015-55	TRANSISTOR 2SJ197-T1	
				Q1009	8-729-015-55	TRANSISTOR 2SJ197-T1	
FL1036	1-239-899-21	FILTER, CHIP EMI		Q1010	8-729-015-55	TRANSISTOR 2SJ197-T1	
FL1037	1-239-899-21	FILTER, CHIP EMI					
FL1038	1-239-899-21	FILTER, CHIP EMI		Q1011	8-729-015-55	TRANSISTOR 2SJ197-T1	
FL1039	1-239-899-21	FILTER, CHIP EMI		Q1012	8-729-015-55	TRANSISTOR 2SJ197-T1	
FL1040	1-239-899-21	FILTER, CHIP EMI		Q1013	8-729-015-55	TRANSISTOR 2SJ197-T1	
				Q1014	8-729-015-55	TRANSISTOR 2SJ197-T1	
				Q1015	8-729-015-55	TRANSISTOR 2SJ197-T1	
				Q1016	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1001	8-759-283-49	IC HD6413002F10		Q1017	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1002	8-759-049-70	IC SN74HC138APW-E05		Q1018	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1003	8-759-049-70	IC SN74HC138APW-E05		Q1019	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1004	8-759-049-80	IC SN74HC541APW-E05		Q1020	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1005	8-759-049-80	IC SN74HC541APW-E05					
				Q1021	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1006	8-759-049-80	IC SN74HC541APW-E05		Q1022	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1007	8-759-049-80	IC SN74HC541APW-E05		Q1023	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1008	8-759-049-70	IC SN74HC138APW-E05		Q1024	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1009	8-759-049-70	IC SN74HC138APW-E05		Q1025	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1010	8-759-055-21	IC HN58C66FP-25					
				Q1026	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1011	8-759-359-91	IC LH5116N4		Q1027	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1012	*8-759-570-69	IC HN27C1024HCC-10-LU110		Q1028	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1013	8-759-518-38	IC PST572CMT		Q1029	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1014	8-759-471-74	IC NC7S08M5X		Q1030	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1015	8-759-049-55	IC SN74HC00APW-E05					
				Q1031	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1016	8-759-049-92	IC SN74HC14APW-E05		Q1032	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1017	8-752-083-82	IC CXA2108Q		Q1033	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1018	8-752-083-82	IC CXA2108Q		Q1034	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1019	8-752-083-82	IC CXA2108Q		Q1035	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1020	8-752-083-82	IC CXA2108Q					
				Q1036	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1021	8-752-083-82	IC CXA2108Q		Q1037	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1022	8-752-083-82	IC CXA2108Q		Q1038	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1023	8-752-083-82	IC CXA2108Q		Q1039	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1024	8-752-083-82	IC CXA2108Q		Q1040	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1025	8-752-083-82	IC CXA2108Q					
				Q1041	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1026	8-752-083-82	IC CXA2108Q		Q1042	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1027	8-752-083-82	IC CXA2108Q		Q1043	8-729-015-55	TRANSISTOR 2SJ197-T1	
IC1028	8-752-083-82	IC CXA2108Q		Q1044	8-729-015-55	TRANSISTOR 2SJ197-T1	



Rf.NO.	PART NO.	DESCRIPTION	REMARK				Rf.NO.	PART NO.	DESCRIPTION	REMARK					
Q1045	8-729-015-55	TRANSISTOR 2SJ197-T1					R1034	1-216-025-91	RES,CHIP	100	5%	1/10W			
							R1035	1-216-025-91	RES,CHIP	100	5%	1/10W			
Q1046	8-729-015-55	TRANSISTOR 2SJ197-T1													
Q1047	8-729-015-55	TRANSISTOR 2SJ197-T1					R1036	1-216-025-91	RES,CHIP	100	5%	1/10W			
Q1048	8-729-015-55	TRANSISTOR 2SJ197-T1					R1037	1-216-025-91	RES,CHIP	100	5%	1/10W			
Q1049	8-729-015-55	TRANSISTOR 2SJ197-T1					R1038	1-216-025-91	RES,CHIP	100	5%	1/10W			
Q1050	8-729-015-55	TRANSISTOR 2SJ197-T1					R1039	1-216-025-91	RES,CHIP	100	5%	1/10W			
							R1040	1-216-025-91	RES,CHIP	100	5%	1/10W			
Q1051	8-729-015-55	TRANSISTOR 2SJ197-T1													
Q1052	8-729-015-55	TRANSISTOR 2SJ197-T1					R1041	1-216-025-91	RES,CHIP	100	5%	1/10W			
Q1053	8-729-015-55	TRANSISTOR 2SJ197-T1					R1042	1-216-025-91	RES,CHIP	100	5%	1/10W			
Q1054	8-729-015-55	TRANSISTOR 2SJ197-T1					R1043	1-216-097-91	RES,CHIP	100K	5%	1/10W			
Q1055	8-729-015-55	TRANSISTOR 2SJ197-T1					R1044	1-216-097-91	RES,CHIP	100K	5%	1/10W			
							R1045	1-216-097-91	RES,CHIP	100K	5%	1/10W			
Q1056	8-729-015-55	TRANSISTOR 2SJ197-T1													
Q1057	8-729-015-55	TRANSISTOR 2SJ197-T1					R1046	1-216-097-91	RES,CHIP	100K	5%	1/10W			
Q1058	8-729-015-55	TRANSISTOR 2SJ197-T1					R1047	1-216-097-91	RES,CHIP	100K	5%	1/10W			
Q1059	8-729-015-55	TRANSISTOR 2SJ197-T1					R1048	1-216-097-91	RES,CHIP	100K	5%	1/10W			
Q1060	8-729-015-55	TRANSISTOR 2SJ197-T1					R1049	1-216-097-91	RES,CHIP	100K	5%	1/10W			
							R1050	1-216-097-91	RES,CHIP	100K	5%	1/10W			
Q1061	8-729-015-55	TRANSISTOR 2SJ197-T1													
Q1062	8-729-015-55	TRANSISTOR 2SJ197-T1					R1051	1-216-097-91	RES,CHIP	100K	5%	1/10W			
Q1063	8-729-015-55	TRANSISTOR 2SJ197-T1					R1052	1-216-097-91	RES,CHIP	100K	5%	1/10W			
Q1064	8-729-015-55	TRANSISTOR 2SJ197-T1					R1053	1-216-097-91	RES,CHIP	100K	5%	1/10W			
Q1065	8-729-015-55	TRANSISTOR 2SJ197-T1					R1054	1-216-097-91	RES,CHIP	100K	5%	1/10W			
							R1055	1-216-097-91	RES,CHIP	100K	5%	1/10W			
Q1066	8-729-904-72	TRANSISTOR DTD143EK													
Q1067	8-729-923-45	TRANSISTOR 2SB1308-T101-QR					R1056	1-216-097-91	RES,CHIP	100K	5%	1/10W			
Q1068	8-729-923-45	TRANSISTOR 2SB1308-T101-QR					R1057	1-216-097-91	RES,CHIP	100K	5%	1/10W			
							R1058	1-216-097-91	RES,CHIP	100K	5%	1/10W			
	<RESISTOR>						R1059	1-216-097-91	RES,CHIP	100K	5%	1/10W			
							R1060	1-216-097-91	RES,CHIP	100K	5%	1/10W			
R1001	1-216-025-91	RES,CHIP	100	5%	1/10W					R1061	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1002	1-216-025-91	RES,CHIP	100	5%	1/10W					R1062	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1003	1-216-025-91	RES,CHIP	100	5%	1/10W					R1063	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1004	1-216-025-91	RES,CHIP	100	5%	1/10W					R1064	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1005	1-216-025-91	RES,CHIP	100	5%	1/10W					R1065	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1006	1-216-025-91	RES,CHIP	100	5%	1/10W					R1066	1-216-695-11	METAL CHIP	68K	0.50%	1/10W
R1007	1-216-025-91	RES,CHIP	100	5%	1/10W					R1067	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
R1008	1-216-025-91	RES,CHIP	100	5%	1/10W					R1074	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1009	1-216-025-91	RES,CHIP	100	5%	1/10W					R1075	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1010	1-216-025-91	RES,CHIP	100	5%	1/10W					R1076	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1011	1-216-025-91	RES,CHIP	100	5%	1/10W					R1077	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1012	1-216-025-91	RES,CHIP	100	5%	1/10W					R1078	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1013	1-216-025-91	RES,CHIP	100	5%	1/10W					R1079	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1014	1-216-025-91	RES,CHIP	100	5%	1/10W					R1080	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1015	1-216-025-91	RES,CHIP	100	5%	1/10W					R1081	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1016	1-216-025-91	RES,CHIP	100	5%	1/10W					R1082	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1017	1-216-025-91	RES,CHIP	100	5%	1/10W					R1083	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1018	1-216-025-91	RES,CHIP	100	5%	1/10W					R1084	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1019	1-216-025-91	RES,CHIP	100	5%	1/10W					R1085	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1020	1-216-025-91	RES,CHIP	100	5%	1/10W					R1086	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1021	1-216-025-91	RES,CHIP	100	5%	1/10W					R1087	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1022	1-216-025-91	RES,CHIP	100	5%	1/10W					R1088	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1023	1-216-025-91	RES,CHIP	100	5%	1/10W					R1089	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1024	1-216-025-91	RES,CHIP	100	5%	1/10W					R1090	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R1025	1-216-025-91	RES,CHIP	100	5%	1/10W					R1091	1-216-695-11	METAL CHIP	68K	0.50%	1/10W
R1026	1-216-025-91	RES,CHIP	100	5%	1/10W					R1092	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1027	1-216-025-91	RES,CHIP	100	5%	1/10W					R1093	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1028	1-216-025-91	RES,CHIP	100	5%	1/10W					R1094	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1029	1-216-025-91	RES,CHIP	100	5%	1/10W					R1095	1-216-295-91	SHORT	0		
R1030	1-216-025-91	RES,CHIP	100	5%	1/10W					R1096	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
R1031	1-216-025-91	RES,CHIP	100	5%	1/10W					R1097	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1032	1-216-025-91	RES,CHIP	100	5%	1/10W					R1098	1-216-097-91	RES,CHIP	100K	5%	1/10W
R1033	1-216-025-91	RES,CHIP	100	5%	1/10W					R1099	1-216-121-91	RES,CHIP	1M	5%	1/10W

Rf.NO.	PART NO.	DESCRIPTION	REMARK			Rf.NO.	PART NO.	DESCRIPTION	REMARK		
R1100	1-216-295-91	SHORT	0			R1160	1-216-001-00	RES,CHIP	10	5%	1/10W
R1101	1-216-121-91	RES,CHIP	1M	5%	1/10W	R1161	1-216-001-00	RES,CHIP	10	5%	1/10W
R1102	1-216-295-91	SHORT	0			R1162	1-216-001-00	RES,CHIP	10	5%	1/10W
R1103	1-216-097-91	RES,CHIP	100K	5%	1/10W	R1163	1-216-001-00	RES,CHIP	10	5%	1/10W
R1104	1-216-097-91	RES,CHIP	100K	5%	1/10W	R1164	1-216-001-00	RES,CHIP	10	5%	1/10W
R1105	1-216-097-91	RES,CHIP	100K	5%	1/10W	R1165	1-216-001-00	RES,CHIP	10	5%	1/10W
R1106	1-216-089-91	RES,CHIP	47K	5%	1/10W	R1166	1-216-001-00	RES,CHIP	10	5%	1/10W
R1107	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1167	1-216-001-00	RES,CHIP	10	5%	1/10W
R1108	1-216-089-91	RES,CHIP	47K	5%	1/10W	R1168	1-216-001-00	RES,CHIP	10	5%	1/10W
R1109	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1169	1-216-001-00	RES,CHIP	10	5%	1/10W
R1110	1-216-089-91	RES,CHIP	47K	5%	1/10W	R1170	1-216-001-00	RES,CHIP	10	5%	1/10W
R1111	1-216-658-11	METAL CHIP	2K	0.50%	1/10W	R1171	1-216-001-00	RES,CHIP	10	5%	1/10W
R1112	1-216-089-91	RES,CHIP	47K	5%	1/10W	R1172	1-216-001-00	RES,CHIP	10	5%	1/10W
R1113	1-216-658-11	METAL CHIP	2K	0.50%	1/10W	R1173	1-216-001-00	RES,CHIP	10	5%	1/10W
R1114	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1174	1-216-001-00	RES,CHIP	10	5%	1/10W
R1115	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1175	1-216-001-00	RES,CHIP	10	5%	1/10W
R1116	1-216-089-91	RES,CHIP	47K	5%	1/10W	R1176	1-216-001-00	RES,CHIP	10	5%	1/10W
R1117	1-216-658-11	METAL CHIP	2K	0.50%	1/10W	R1177	1-216-001-00	RES,CHIP	10	5%	1/10W
R1118	1-216-089-91	RES,CHIP	47K	5%	1/10W	R1178	1-216-001-00	RES,CHIP	10	5%	1/10W
R1119	1-216-658-11	METAL CHIP	2K	0.50%	1/10W	R1179	1-216-001-00	RES,CHIP	10	5%	1/10W
R1120	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1180	1-216-001-00	RES,CHIP	10	5%	1/10W
R1121	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1181	1-216-001-00	RES,CHIP	10	5%	1/10W
R1122	1-216-089-91	RES,CHIP	47K	5%	1/10W	R1182	1-216-001-00	RES,CHIP	10	5%	1/10W
R1123	1-216-658-11	METAL CHIP	2K	0.50%	1/10W	R1183	1-216-001-00	RES,CHIP	10	5%	1/10W
R1124	1-216-089-91	RES,CHIP	47K	5%	1/10W	R1184	1-216-001-00	RES,CHIP	10	5%	1/10W
R1125	1-216-658-11	METAL CHIP	2K	0.50%	1/10W	R1185	1-216-001-00	RES,CHIP	10	5%	1/10W
R1126	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1186	1-216-001-00	RES,CHIP	10	5%	1/10W
R1127	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1187	1-216-001-00	RES,CHIP	10	5%	1/10W
R1128	1-216-089-91	RES,CHIP	47K	5%	1/10W	R1188	1-216-001-00	RES,CHIP	10	5%	1/10W
R1129	1-216-658-11	METAL CHIP	2K	0.50%	1/10W	R1189	1-216-001-00	RES,CHIP	10	5%	1/10W
R1130	1-216-089-91	RES,CHIP	47K	5%	1/10W	R1190	1-216-001-00	RES,CHIP	10	5%	1/10W
R1131	1-216-658-11	METAL CHIP	2K	0.50%	1/10W	R1191	1-216-001-00	RES,CHIP	10	5%	1/10W
R1132	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1192	1-216-001-00	RES,CHIP	10	5%	1/10W
R1133	1-216-049-91	RES,CHIP	1K	5%	1/10W	R1193	1-216-001-00	RES,CHIP	10	5%	1/10W

Rf.NO.	PART NO.	DESCRIPTION	REMARK	Rf.NO.	PART NO.	DESCRIPTION	REMARK
R1220	1-216-001-00	RES,CHIP	10 5% 1/10W	C2004	1-126-204-11	ELECT CHIP 47MF	20% 16V
R1221	1-216-001-00	RES,CHIP	10 5% 1/10W	C2005	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1222	1-216-295-91	SHORT	0	C2006	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1605	1-216-295-91	SHORT	0	C2007	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1610	1-216-089-91	RES,CHIP	47K 5% 1/10W	C2008	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1611	1-216-089-91	RES,CHIP	47K 5% 1/10W	C2010	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
R1622	1-216-073-00	RES,CHIP	10K 5% 1/10W	C2012	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1623	1-216-041-00	RES,CHIP	470 5% 1/10W	C2013	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1624	1-216-073-00	RES,CHIP	10K 5% 1/10W	C2014	1-109-982-11	CERAMIC CHIP 1MF	10% 10V
R1625	1-216-031-00	RES,CHIP	180 5% 1/10W	C2015	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1626	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2016	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1627	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2017	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1628	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2018	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1629	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2019	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1630	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2020	1-126-204-11	ELECT CHIP 47MF	20% 16V
R1631	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2021	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1632	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2022	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1633	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2023	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1634	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2024	1-126-204-11	ELECT CHIP 47MF	20% 16V
R1635	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2025	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1636	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2026	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1637	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2027	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1638	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2028	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1639	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2029	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1640	1-216-097-91	RES,CHIP	100K 5% 1/10W	C2030	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R1641	1-216-097-91	RES,CHIP	100K 5% 1/10W	<CONNECTOR>			
R1642	1-216-097-91	RES,CHIP	100K 5% 1/10W	CN2001	1-779-590-12	CONNECTOR (D SUB) 15P	
R1643	1-216-097-91	RES,CHIP	100K 5% 1/10W	CN2002	1-779-590-12	CONNECTOR (D SUB) 15P	
R1644	1-216-097-91	RES,CHIP	100K 5% 1/10W	CN2003	1-691-856-11	CONNECTOR, BOARD TO BOARD 60P	
R1645	1-216-097-91	RES,CHIP	100K 5% 1/10W	CN2004	* 1-506-468-11	PIN, CONNECTOR 3P	
R1646	1-216-037-00	RES,CHIP	330 5% 1/10W	<DIODE>			
R1647	1-216-037-00	RES,CHIP	330 5% 1/10W	D2001	8-719-800-76	DIODE 1SS226	
R1648	1-216-037-00	RES,CHIP	330 5% 1/10W	D2002	8-719-800-76	DIODE 1SS226	
R1649	1-216-037-00	RES,CHIP	330 5% 1/10W	D2003	8-719-800-76	DIODE 1SS226	
<TEST PIN>				D2004	8-719-800-76	DIODE 1SS226	
TP1001	1-535-757-11	CHIP, CHECKER		D2005	8-719-800-76	DIODE 1SS226	
TP1002	1-535-757-11	CHIP, CHECKER		D2006	8-719-800-76	DIODE 1SS226	
TP1003	1-535-757-11	CHIP, CHECKER		D2007	8-719-800-76	DIODE 1SS226	
TP1004	1-535-757-11	CHIP, CHECKER		D2008	8-719-800-76	DIODE 1SS226	
<CRYSTAL>				D2009	8-719-800-76	DIODE 1SS226	
X1001	1-767-999-21	VIBRATOR, CRYSTAL (7.8565MHz)		D2010	8-719-800-76	DIODE 1SS226	
X1002	1-781-001-21	VIBRATOR, CRYSTAL (6.5536MHz)		D2011	8-719-800-76	DIODE 1SS226	
X1003	1-781-000-21	VIBRATOR, CRYSTAL (9.8304MHz)		D2012	8-719-800-76	DIODE 1SS226	
*****				D2013	8-719-800-76	DIODE 1SS226	
* A-1275-156-A Q COMPL				D2014	8-719-800-76	DIODE 1SS226	
*****				D2015	8-719-800-76	DIODE 1SS226	
* 4-063-313-01 PANEL, Q				D2016	8-719-800-76	DIODE 1SS226	
* 4-063-315-01 LAMP COVER				D2033	8-719-946-89	DIODE GL5ED5	
7-682-947-01 SCREW +PSW 3X6				D2034	8-719-988-62	DIODE 1SS355	
<CAPACITOR>				<FILTER>			
C2001	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V	FL2001	1-239-903-11	FILTER, CHIP EMI	
C2002	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V	FL2002	1-239-400-11	FILTER, CHIP EMI	
C2003	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V	FL2003	1-239-400-11	FILTER, CHIP EMI	
				FL2004	1-239-899-21	FILTER, CHIP EMI	
				FL2005	1-239-400-11	FILTER, CHIP EMI	



Rf.NO.	PART NO.	DESCRIPTION	REMARK	Rf.NO.	PART NO.	DESCRIPTION	REMARK
FL2006	1-239-903-11	FILTER, CHIP EMI		R2036	1-216-097-91	RES,CHIP 100K 5%	1/10W
FL2007	1-239-903-11	FILTER, CHIP EMI		R2037	1-216-025-91	RES,CHIP 100 5%	1/10W
FL2008	1-239-035-11	FILTER, EMI (CHIP)		R2038	1-216-025-91	RES,CHIP 100 5%	1/10W
FL2009	1-414-135-11	FERRITE 0UH		R2039	1-216-025-91	RES,CHIP 100 5%	1/10W
FL2010	1-414-135-11	FERRITE 0UH		R2040	1-216-025-91	RES,CHIP 100 5%	1/10W
FL2011	1-414-135-11	FERRITE 0UH		R2041	1-216-025-91	RES,CHIP 100 5%	1/10W
FL2012	1-414-135-11	FERRITE 0UH		R2042	1-216-025-91	RES,CHIP 100 5%	1/10W
FL2013	1-414-135-11	FERRITE 0UH		R2043	1-216-025-91	RES,CHIP 100 5%	1/10W
FL2014	1-414-135-11	FERRITE 0UH		R2044	1-216-025-91	RES,CHIP 100 5%	1/10W
				R2045	1-216-025-91	RES,CHIP 100 5%	1/10W
	<IC>			R2046	1-216-025-91	RES,CHIP 100 5%	1/10W
IC2001	8-752-391-61	IC CXD316-107Q		R2047	1-216-025-91	RES,CHIP 100 5%	1/10W
IC2002	8-759-479-30	IC SN75C1167NS-E05		R2048	1-216-097-91	RES,CHIP 100K 5%	1/10W
IC2003	8-759-926-77	IC SN74HC541ANS		R2049	1-216-025-91	RES,CHIP 100 5%	1/10W
IC2004	8-759-926-77	IC SN74HC541ANS		R2050	1-216-097-91	RES,CHIP 100K 5%	1/10W
IC2005	8-759-931-48	IC SN74LS629NS		R2051	1-216-025-91	RES,CHIP 100 5%	1/10W
IC2006	8-759-926-77	IC SN74HC541ANS		R2052	1-216-097-91	RES,CHIP 100K 5%	1/10W
	<TRANSISTOR>			R2053	1-216-025-91	RES,CHIP 100 5%	1/10W
Q2001	8-729-929-99	TRANSISTOR UMB11-TN		R2054	1-216-097-91	RES,CHIP 100K 5%	1/10W
	<RESISTOR>			R2055	1-216-097-91	RES,CHIP 100K 5%	1/10W
R2001	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2056	1-216-025-91	RES,CHIP 100 5%	1/10W
R2002	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2057	1-216-097-91	RES,CHIP 100K 5%	1/10W
R2003	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2058	1-216-025-91	RES,CHIP 100 5%	1/10W
R2004	1-216-053-00	RES,CHIP 1.5K 5%	1/10W	R2059	1-216-097-91	RES,CHIP 100K 5%	1/10W
R2005	1-216-053-00	RES,CHIP 1.5K 5%	1/10W	R2060	1-216-025-91	RES,CHIP 100 5%	1/10W
R2006	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2061	1-216-097-91	RES,CHIP 100K 5%	1/10W
R2007	1-216-025-91	RES,CHIP 100 5%	1/10W	R2062	1-216-025-91	RES,CHIP 100 5%	1/10W
R2008	1-216-053-00	RES,CHIP 1.5K 5%	1/10W	R2063	1-216-097-91	RES,CHIP 100K 5%	1/10W
R2009	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2064	1-216-025-91	RES,CHIP 100 5%	1/10W
R2010	1-216-025-91	RES,CHIP 100 5%	1/10W	R2065	1-216-097-91	RES,CHIP 100K 5%	1/10W
R2011	1-216-053-00	RES,CHIP 1.5K 5%	1/10W	R2066	1-216-025-91	RES,CHIP 100 5%	1/10W
R2012	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2067	1-216-097-91	RES,CHIP 100K 5%	1/10W
R2013	1-216-025-91	RES,CHIP 100 5%	1/10W	R2068	1-216-025-91	RES,CHIP 100 5%	1/10W
R2014	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2069	1-216-089-91	RES,CHIP 47K 5%	1/10W
R2015	1-216-025-91	RES,CHIP 100 5%	1/10W	R2070	1-216-089-91	RES,CHIP 47K 5%	1/10W
R2016	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2071	1-216-097-91	RES,CHIP 100K 5%	1/10W
R2017	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2072	1-216-025-91	RES,CHIP 100 5%	1/10W
R2018	1-216-025-91	RES,CHIP 100 5%	1/10W	R2073	1-216-097-91	RES,CHIP 100K 5%	1/10W
R2019	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2074	1-216-025-91	RES,CHIP 100 5%	1/10W
R2020	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2075	1-216-049-91	RES,CHIP 1K 5%	1/10W
R2021	1-216-025-91	RES,CHIP 100 5%	1/10W	R2076	1-216-049-91	RES,CHIP 1K 5%	1/10W
R2022	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2077	1-216-097-91	RES,CHIP 100K 5%	1/10W
R2023	1-216-025-91	RES,CHIP 100 5%	1/10W	R2078	1-216-025-91	RES,CHIP 100 5%	1/10W
R2024	1-216-295-91	SHORT 0		R2079	1-216-097-91	RES,CHIP 100K 5%	1/10W
R2025	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2080	1-216-025-91	RES,CHIP 100 5%	1/10W
R2026	1-216-025-91	RES,CHIP 100 5%	1/10W	R2081	1-216-025-91	RES,CHIP 100 5%	1/10W
R2027	1-216-295-91	SHORT 0		R2082	1-216-097-91	RES,CHIP 100K 5%	1/10W
R2028	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2083	1-216-025-91	RES,CHIP 100 5%	1/10W
R2029	1-216-025-91	RES,CHIP 100 5%	1/10W	R2084	1-216-025-91	RES,CHIP 100 5%	1/10W
R2030	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2085	1-216-025-91	RES,CHIP 100 5%	1/10W
R2031	1-216-025-91	RES,CHIP 100 5%	1/10W	R2086	1-216-025-91	RES,CHIP 100 5%	1/10W
R2032	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2087	1-216-089-91	RES,CHIP 47K 5%	1/10W
R2033	1-216-025-91	RES,CHIP 100 5%	1/10W	R2088	1-216-089-91	RES,CHIP 47K 5%	1/10W
R2034	1-216-097-91	RES,CHIP 100K 5%	1/10W	R2089	1-216-049-91	RES,CHIP 1K 5%	1/10W
R2035	1-216-025-91	RES,CHIP 100 5%	1/10W	R2090	1-216-049-91	RES,CHIP 1K 5%	1/10W
				R2091	1-216-089-91	RES,CHIP 47K 5%	1/10W
				R2092	1-216-089-91	RES,CHIP 47K 5%	1/10W
				R2093	1-216-049-91	RES,CHIP 1K 5%	1/10W
				R2094	1-216-049-91	RES,CHIP 1K 5%	1/10W
				R2095	1-216-089-91	RES,CHIP 47K 5%	1/10W



Rf.NO.	PART NO.	DESCRIPTION	REMARK		
R2096	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2097	1-216-047-91	RES,CHIP	820	5%	1/10W
R2098	1-216-033-00	RES,CHIP	220	5%	1/10W
R2099	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2100	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2101	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2102	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2103	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2104	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2105	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2106	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2107	1-216-029-00	RES,CHIP	150	5%	1/10W
R2108	1-216-029-00	RES,CHIP	150	5%	1/10W
R2109	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2110	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2111	1-216-089-91	RES,CHIP	47K	5%	1/10W
R2112	1-216-049-91	RES,CHIP	1K	5%	1/10W
R2113	1-216-295-91	SHORT	0		
R2114	1-216-295-91	SHORT	0		
R2115	1-216-295-91	SHORT	0		
R2116	1-216-295-91	SHORT	0		
R2117	1-216-295-91	SHORT	0		
R2118	1-216-295-91	SHORT	0		
R2119	1-216-295-91	SHORT	0		
R2120	1-216-295-91	SHORT	0		
R2121	1-216-295-91	SHORT	0		
R2122	1-216-295-91	SHORT	0		

<VARIABLE RESISTOR>

RV2001 1-230-303-00 RES, ADJ, CERMET 1K

<SWITCH>

SW2001 1-771-446-11 SWITCH, ROTARY
SW2002 1-771-446-11 SWITCH, ROTARY
SW2003 1-771-446-11 SWITCH, ROTARY

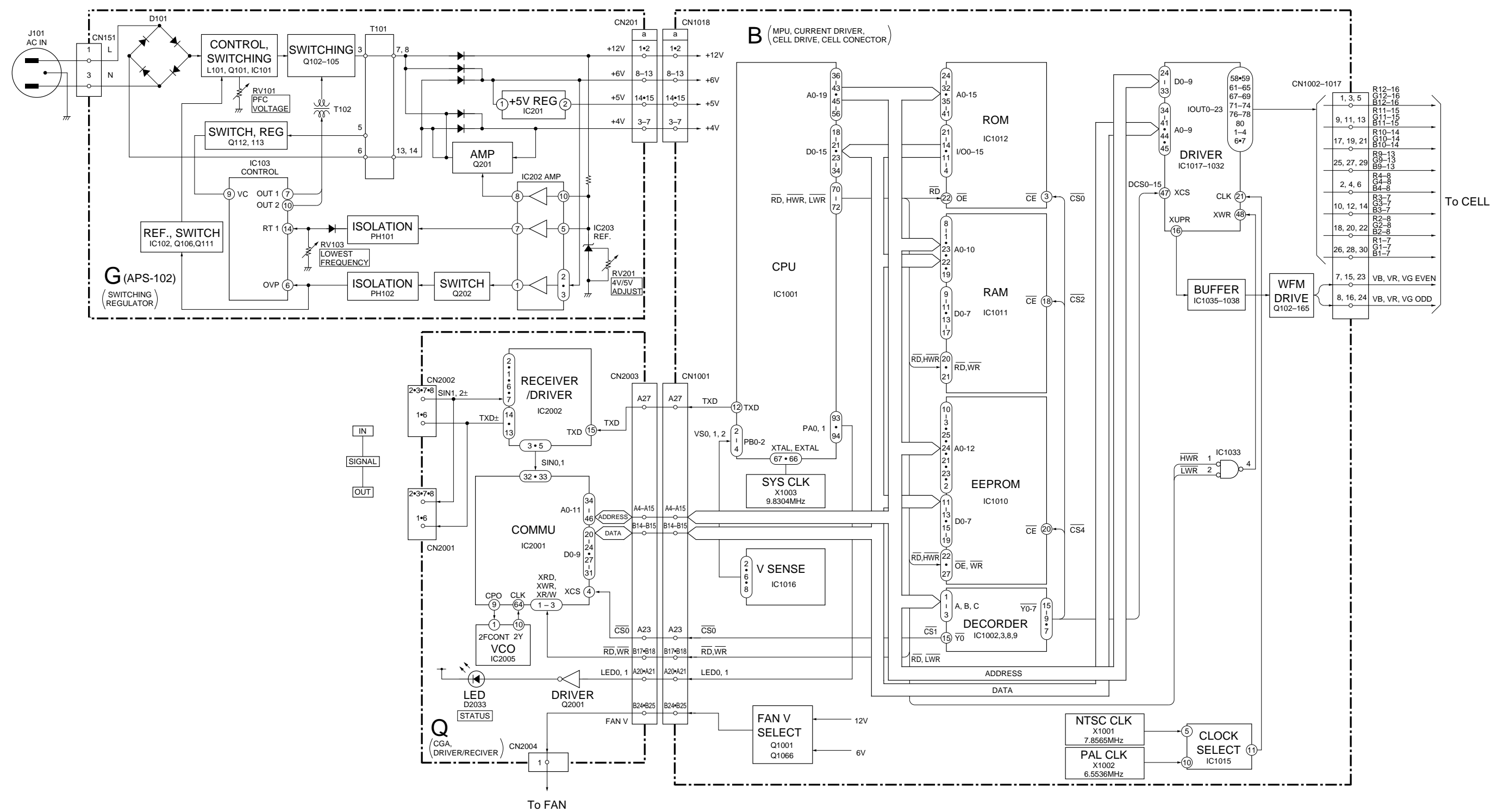
<TEST PIN>

TP2001 1-535-757-11 CHIP, CHECKER
TP2002 1-535-757-11 CHIP, CHECKER
TP2003 1-535-757-11 CHIP, CHECKER

MISCELLANEOUS

J101 △1-540-051-12 INLET AC





SECTION 7
BLOCK DIAGRAM



SECTION 8
DIAGRAMS


8-1. SCHEMATIC DIAGRAMS AND
PRINTED WIRING BOARDS


Note:

- All capacitors are in μF unless otherwise noted. pF: μμF
50 WV or less are not indicated except for electrolytics.
- All electrolytics are in 50 V unless otherwise specified.
- All resistors are in ohms, 1/4 W in resistance, 1/10W in chip resistance.
kΩ = 1000 Ω, MΩ = 1000k Ω
-  : nonflammable resistor.
-  : fusible resistor.
-  : internal component.
-  : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Voltage value is the reference value between it and the earth, when signal is received from JME-UA200 (digital multi-meter used : 10 M ohms/V DC).
- Unit of voltage values is V (volt).





Reference information

RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NONFRAMMABLE CARBON
	FUSE	: NONFLAMMABLE FUSIBLE
	RS	: NONFLAMMABLE METAL OXIDE
	RB	: NONFLAMMABLE CEMENT
	RW	: NONFLAMMABLE WIREWOUND
	※	: ADJUSTMENT RESISTOR
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

The components identified  marked are critical for safety.
Replace only with the part number specified.

Les composants identifiés par la marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

【使用上の注意】

- ケミコン，タンタルを除くコンデンサで耐圧50 V以下のものは，その耐圧を省略。単位はすべてμF（pはpF）
- ケミコン，タンタルのコンデンサで耐圧50Vは省略。
- 抵抗で指示のないものは1/4 W，チップ抵抗は1/10 Wです。単位は全てΩ。k Ω = 1000 Ω，M Ω = 1000 kΩ
-  印はヒューズ抵抗。
-  印は不燃性抵抗。
-  印は内蔵部品。
-  印はパネル表示および調整名称。
- 半固定抵抗および可変抵抗器の特性カーブ（B）は省略。
- 電圧値は，JME-UA200より信号を受信したときの対アース間の参考値。
（使用デジタルマルチメーター10 MΩ/V DC）
- 電圧値の単位は V（ボルト）

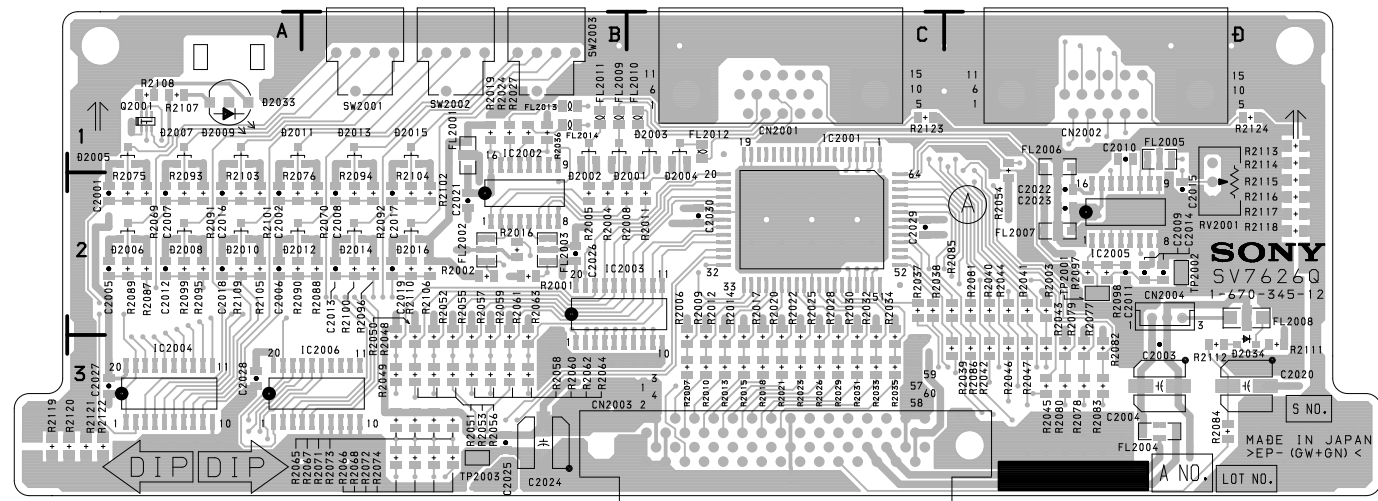
－部品特性省略表－

- 固定抵抗
RN : 金属被膜
RC : ソリッド
FPRD : 不燃性カーボン
FUSE : 不燃性ヒューズ
RS : 不燃性酸化金属被膜
RB : 不燃性セメント
RW : 不燃性巻線
※ : 調整抵抗

- マイクロインダクタ
LF-8B : マイクロインダクタ

- コンデンサ
TA : タンタル
PS : スチロール
PP : ポリプロピレン
PT : マイラ
MPS : メタライズドポリエステル
MPP : メタライズドポリプロピレン
ALB : バイポーラ
ALT : 高温用
ALR : ハイリップル

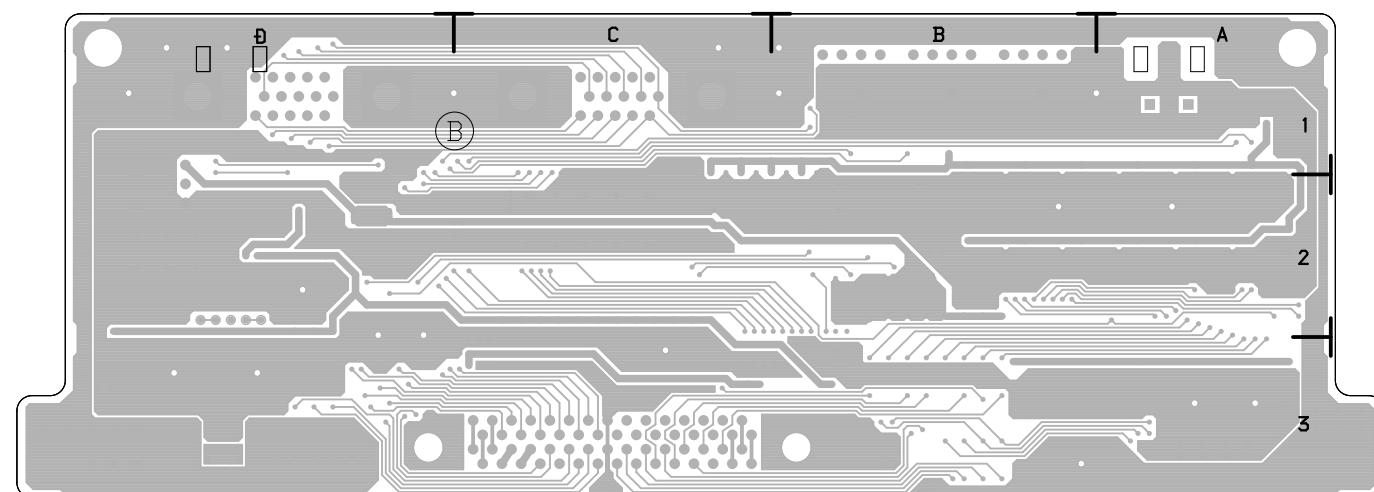
△印の部品は，安全性を維持するために，重要な部品です。従って交換時は，必ず指定の部品を使用してください。



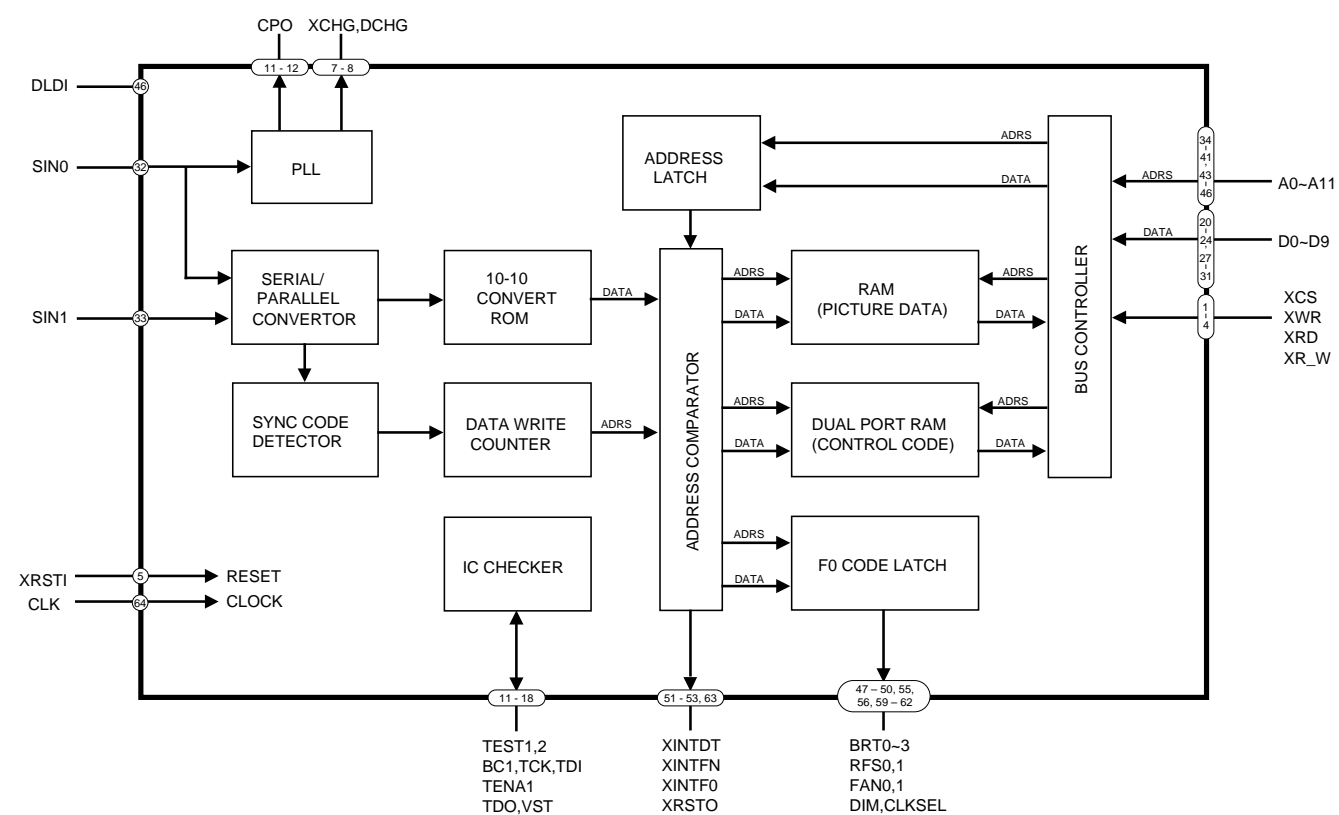
Q BOARD

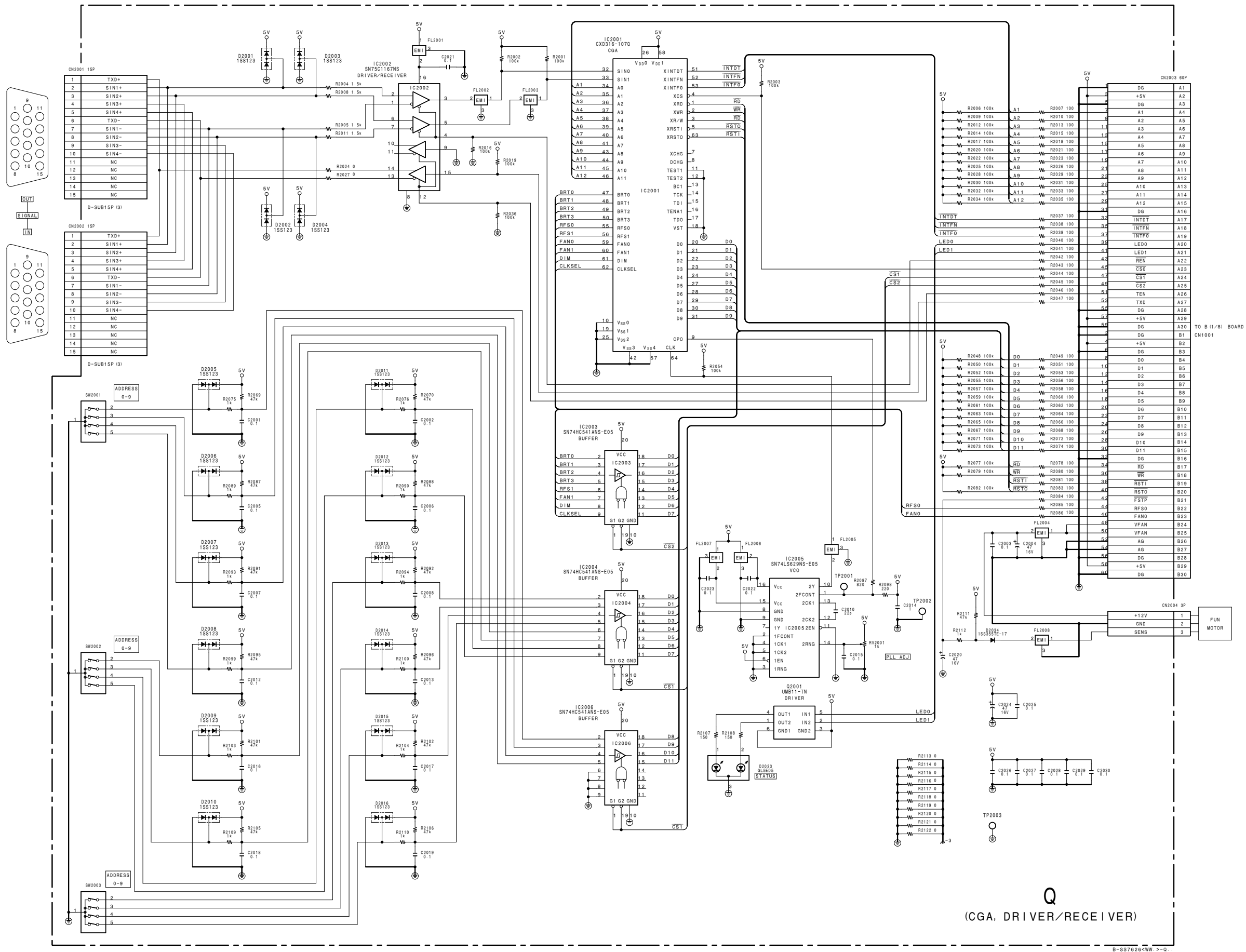
D2001	B-1	D2010	A-2	IC2001	C-2	TP2001	D-2
D2002	B-1	D2011	A-1	IC2002	B-2	TP2002	D-2
D2003	C-1	D2012	A-2	IC2003	B-2	TP2003	B-3
D2004	C-1	D2013	B-1	IC2004	A-3		
D2005	A-1	D2014	B-2	IC2005	D-2	RV2001	D-2
D2006	A-2	D2015	B-1	IC2006	B-3		
D2007	A-1	D2016	B-2				
D2008	A-2	D2033	A-1	Q2001	A-1		
D2009	A-1	D2034	D-3				

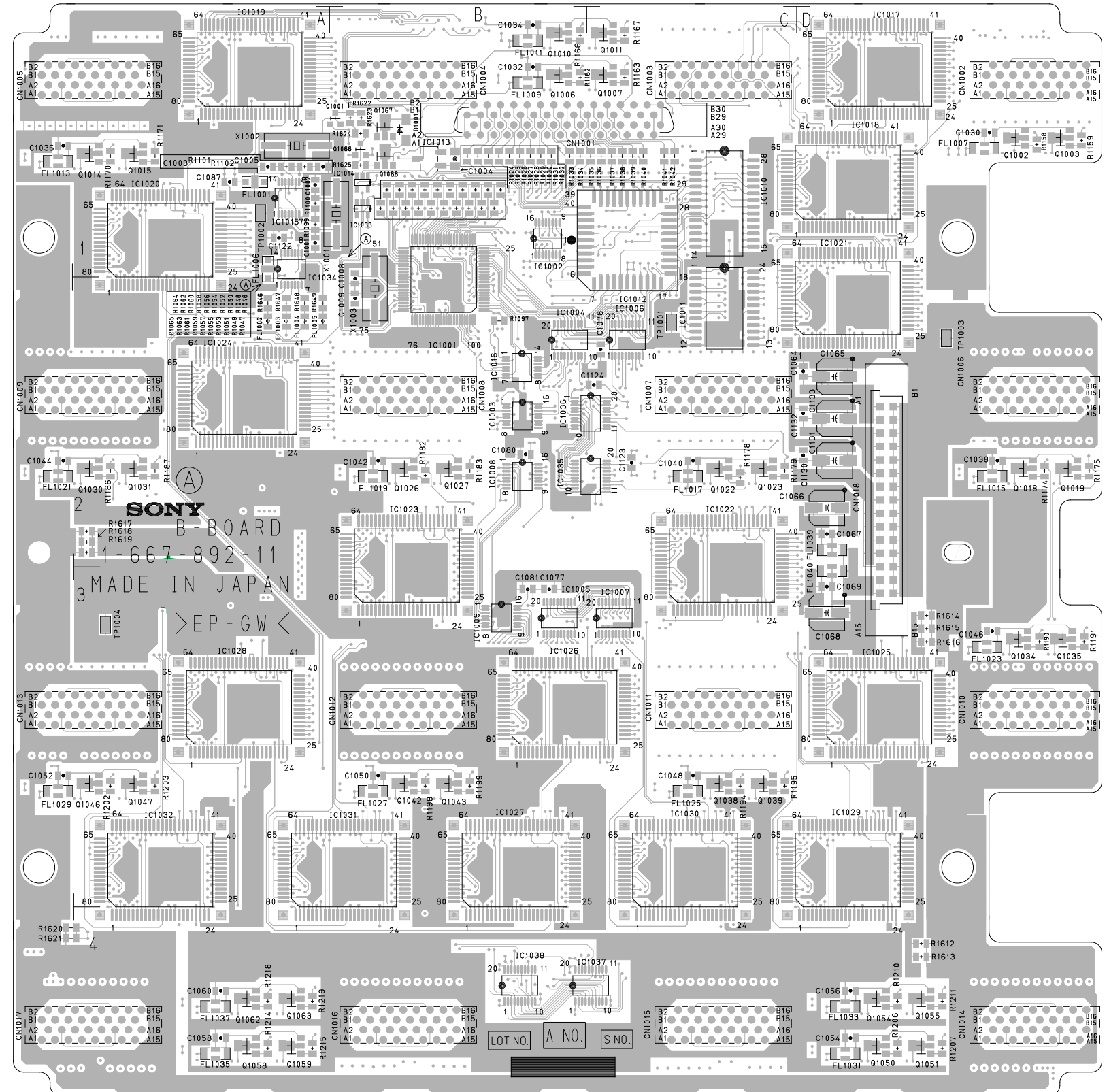
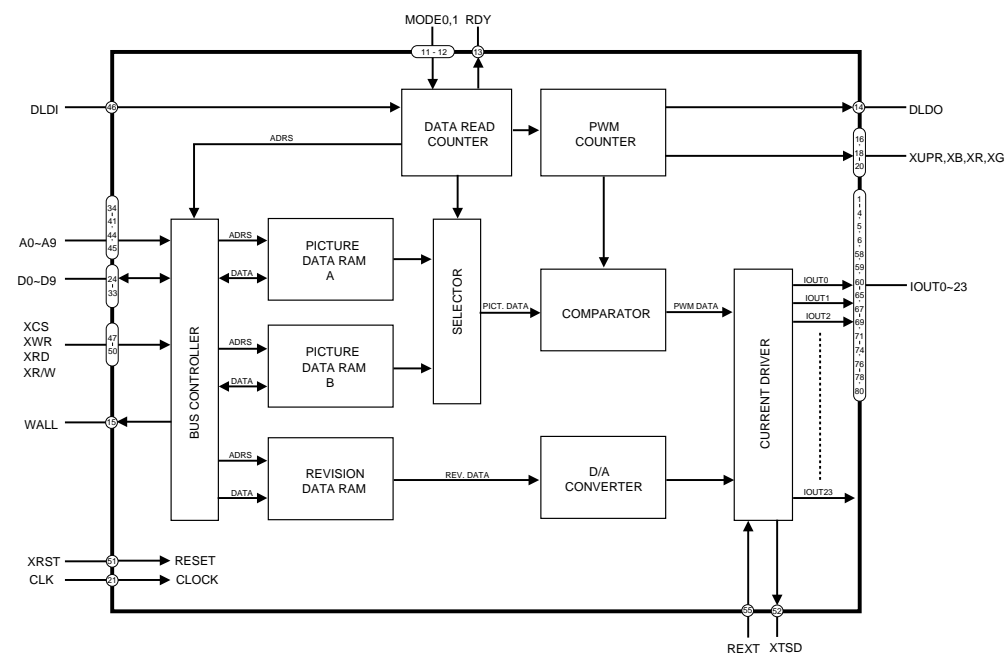
Q -A SIDE-SUFFIX-12



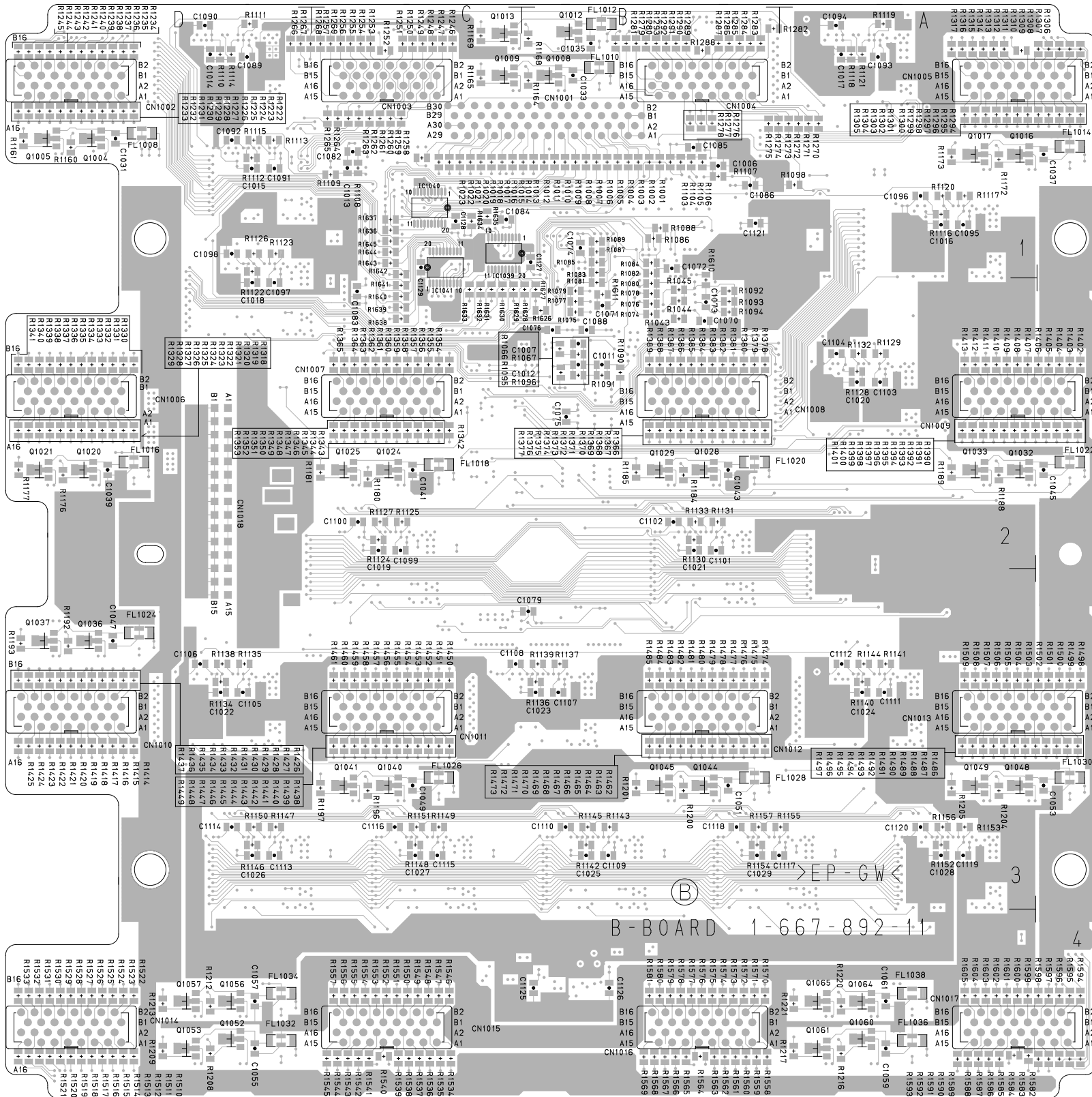
Q -B SIDE-
SUFFIX-12







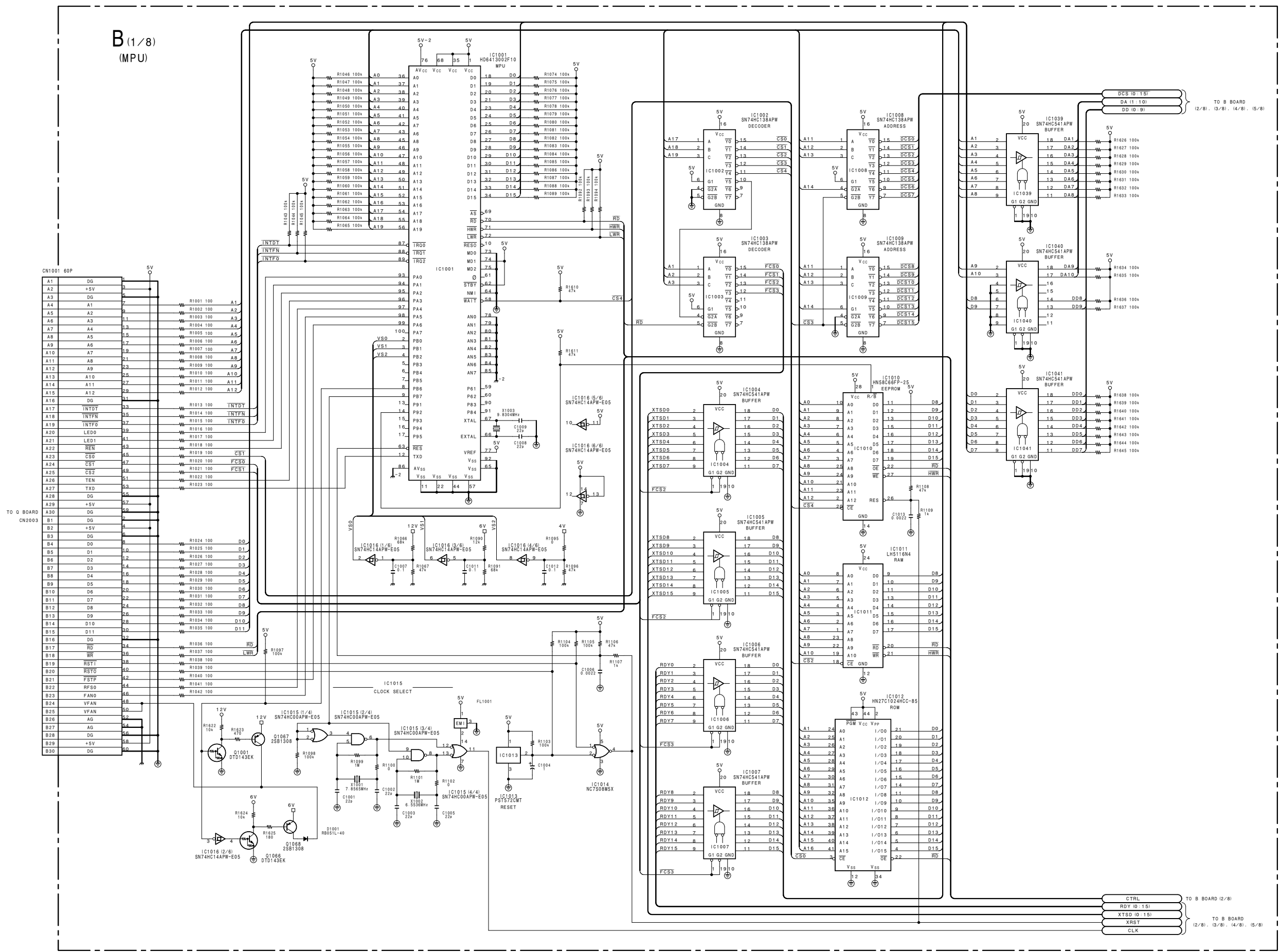
B -A SIDE-
SUFFIX-11

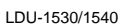


B BOARD
*: B SIDE

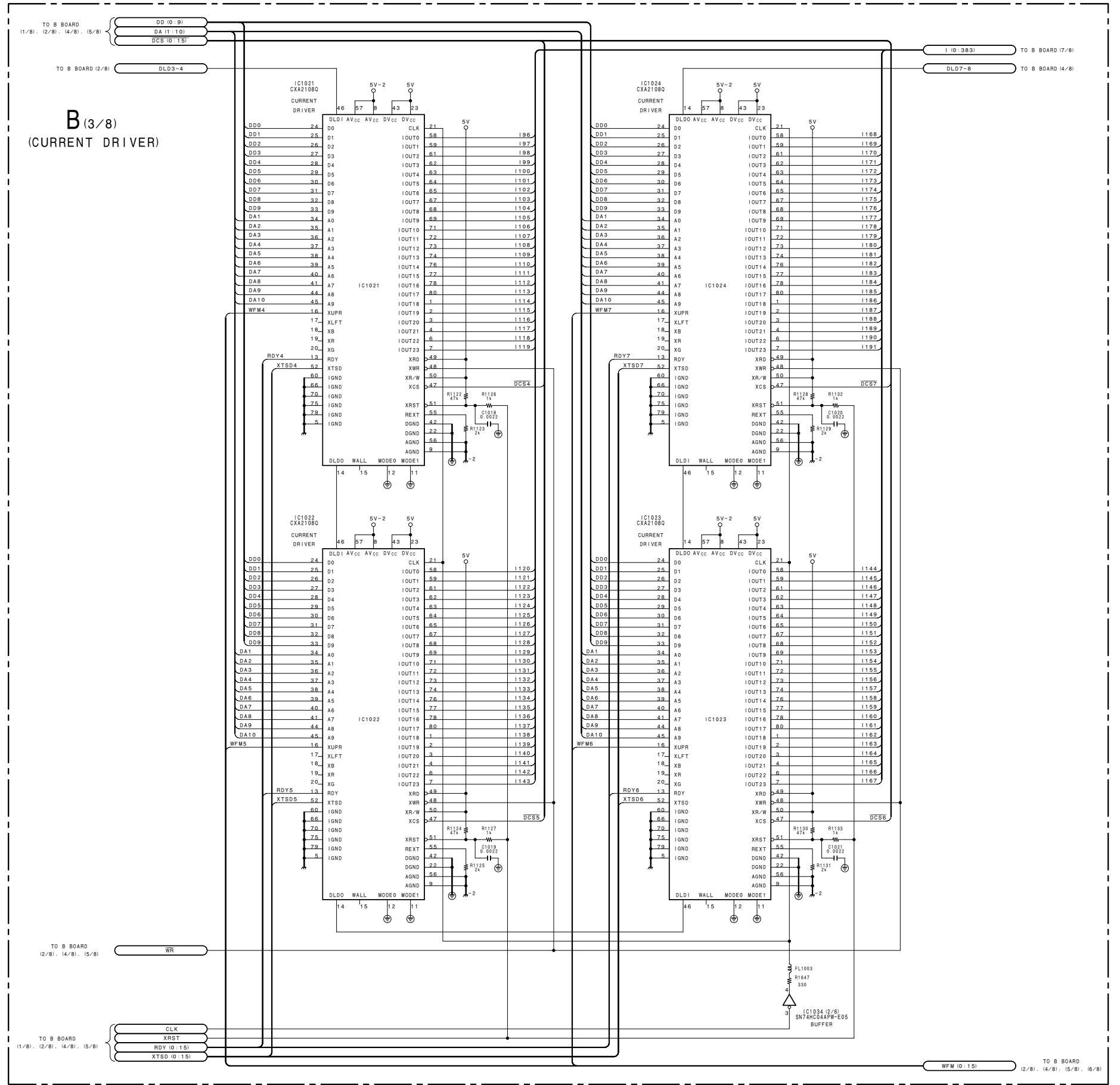
D1001	B-1	Q1016	*A-1
IC1001	B-2	Q1017	*A-1
IC1002	B-1	Q1018	D-2
IC1003	B-2	Q1019	D-2
IC1004	B-2	Q1020	*D-2
IC1005	B-3	Q1021	*D-2
IC1006	C-2	Q1022	C-2
IC1007	C-3	Q1023	C-2
IC1008	B-2	Q1024	*C-2
IC1009	B-3	Q1025	*C-2
IC1010	C-1	Q1026	B-2
IC1011	C-2	Q1027	B-2
IC1012	C-1	Q1028	*B-2
IC1013	B-1	Q1029	*B-2
IC1014	B-1	Q1030	A-2
IC1015	A-1	Q1031	A-2
IC1016	B-2	Q1032	*A-2
IC1017	D-1	Q1033	*A-2
IC1018	D-1	Q1034	D-3
IC1019	A-1	Q1035	D-3
IC1020	A-1	Q1036	*D-3
IC1021	D-2	Q1037	*D-3
IC1022	C-2	Q1038	C-3
IC1023	B-2	Q1039	C-3
IC1024	A-2	Q1040	*C-3
IC1025	D-3	Q1041	*C-3
IC1026	B-3	Q1042	B-3
IC1027	B-3	Q1043	B-3
IC1028	A-3	Q1044	*B-3
IC1029	D-3	Q1045	*B-3
IC1030	C-3	Q1046	A-3
IC1031	B-3	Q1047	A-3
IC1032	A-3	Q1048	*A-3
IC1033	B-1	Q1049	*A-3
IC1034	A-1	Q1050	D-4
IC1035	C-2	Q1051	D-4
IC1036	C-2	Q1052	*D-4
IC1037	C-4	Q1053	*D-4
IC1038	B-4	Q1054	D-4
IC1039	*C-1	Q1055	D-4
IC1040	*C-1	Q1056	*D-4
IC1041	*C-1	Q1057	*D-4
		Q1058	A-4
		Q1059	A-4
Q1001	B-1	Q1060	*A-4
Q1002	D-1	Q1061	*A-4
Q1003	D-1	Q1062	A-4
Q1004	*D-1	Q1063	A-4
Q1005	*D-1	Q1064	*A-4
Q1006	B-1	Q1065	*A-4
Q1007	C-1	Q1066	B-1
Q1008	*B-1	Q1067	B-1
Q1009	*C-1	Q1068	B-1
Q1010	B-1		
Q1011	C-1	TPI1001	C-2
Q1012	*B-1	TPI1002	A-1
Q1013	*C-1	TPI1003	D-2
Q1014	A-1	TPI1004	A-3
Q1015	A-1		

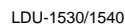
B - B SIDE-
SUFFIX-11

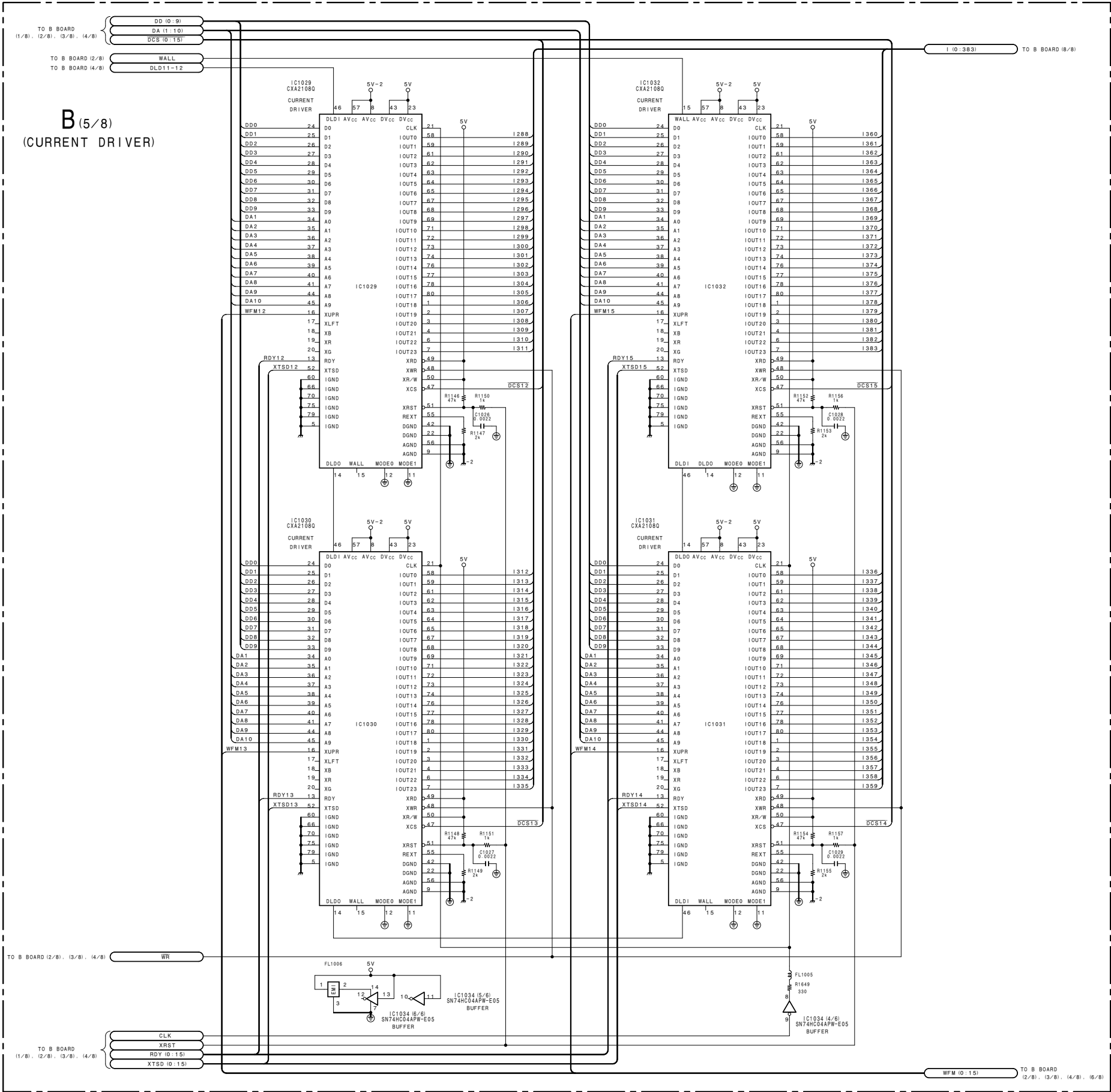


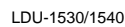


B (3/8)









1

2

3

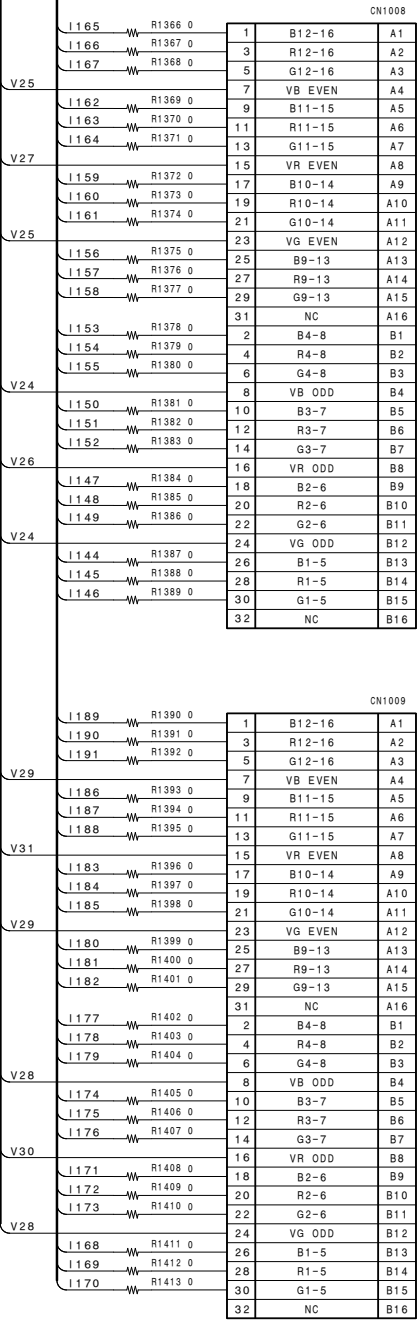
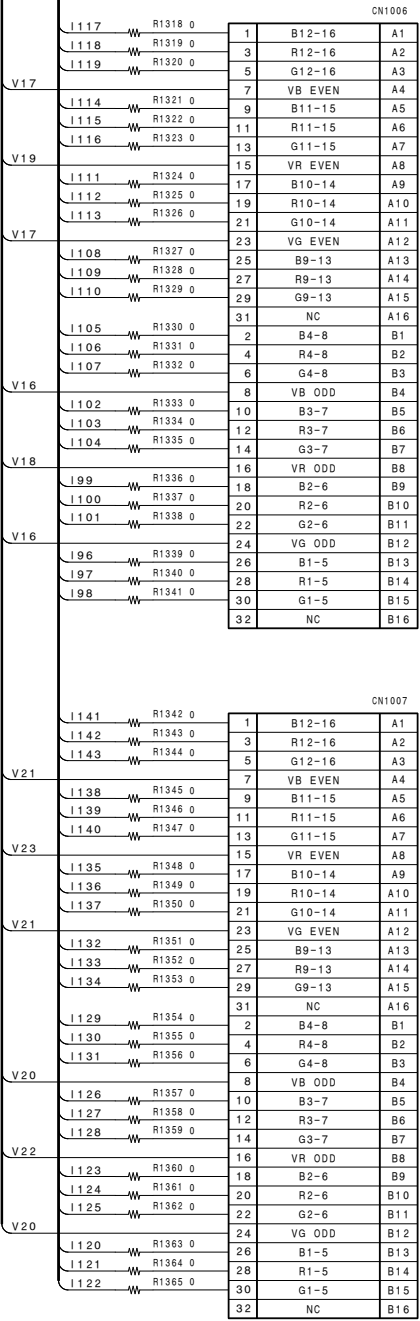
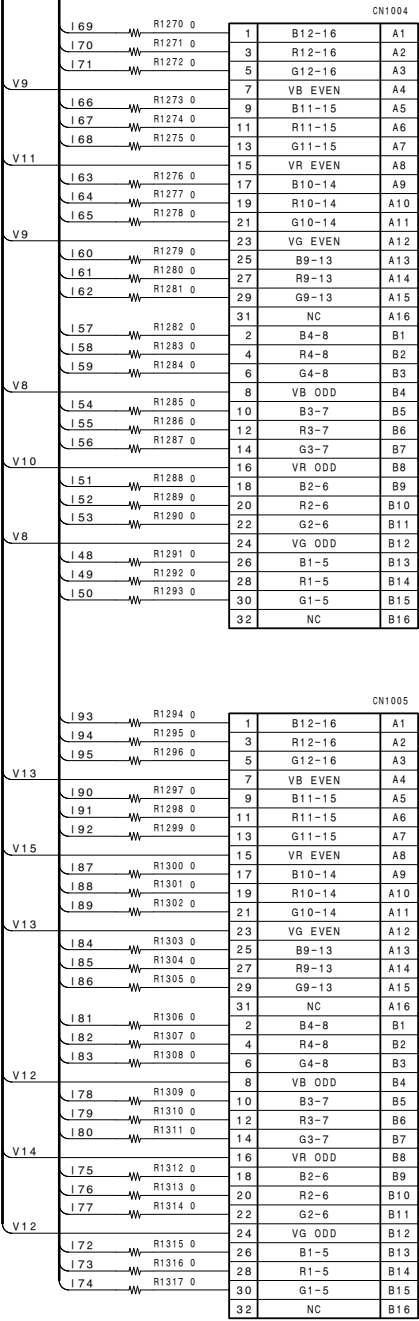
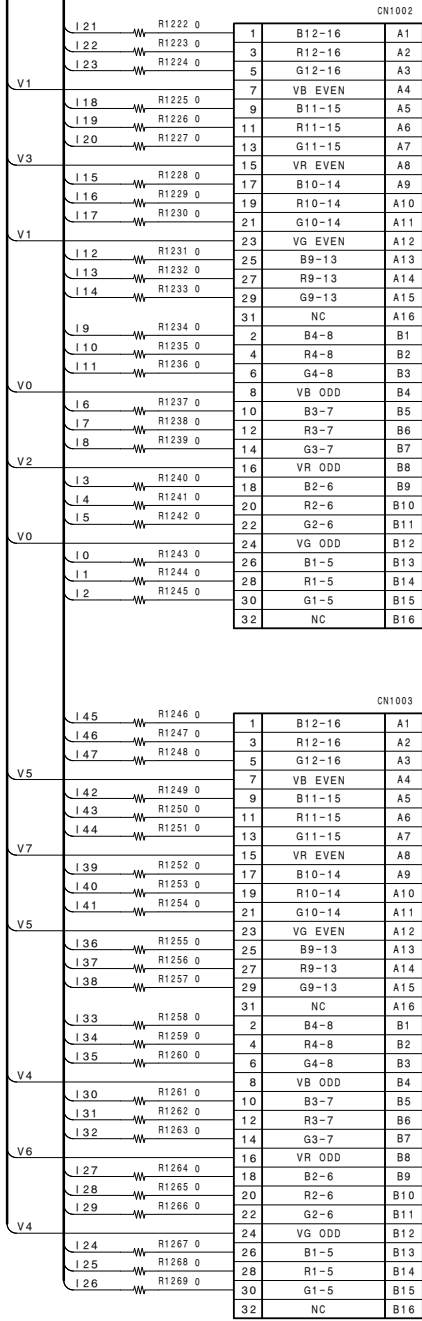
4

5

FROM B BOARD
(2/8) (3/8)
FROM B BOARD
(6/8)

I (0:383)
V (0:63)

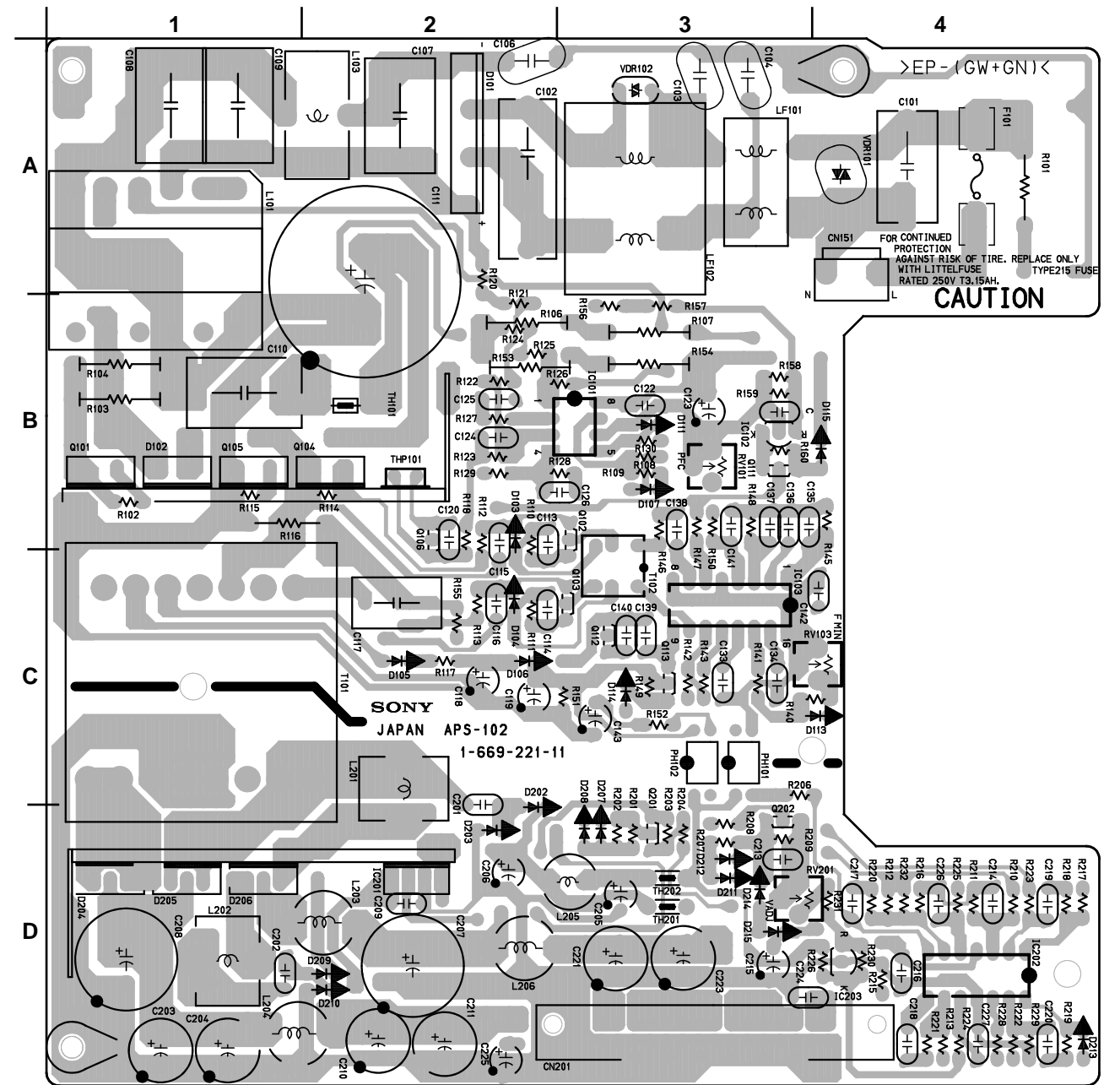
B (7/8)
(CELL CONNECTOR)



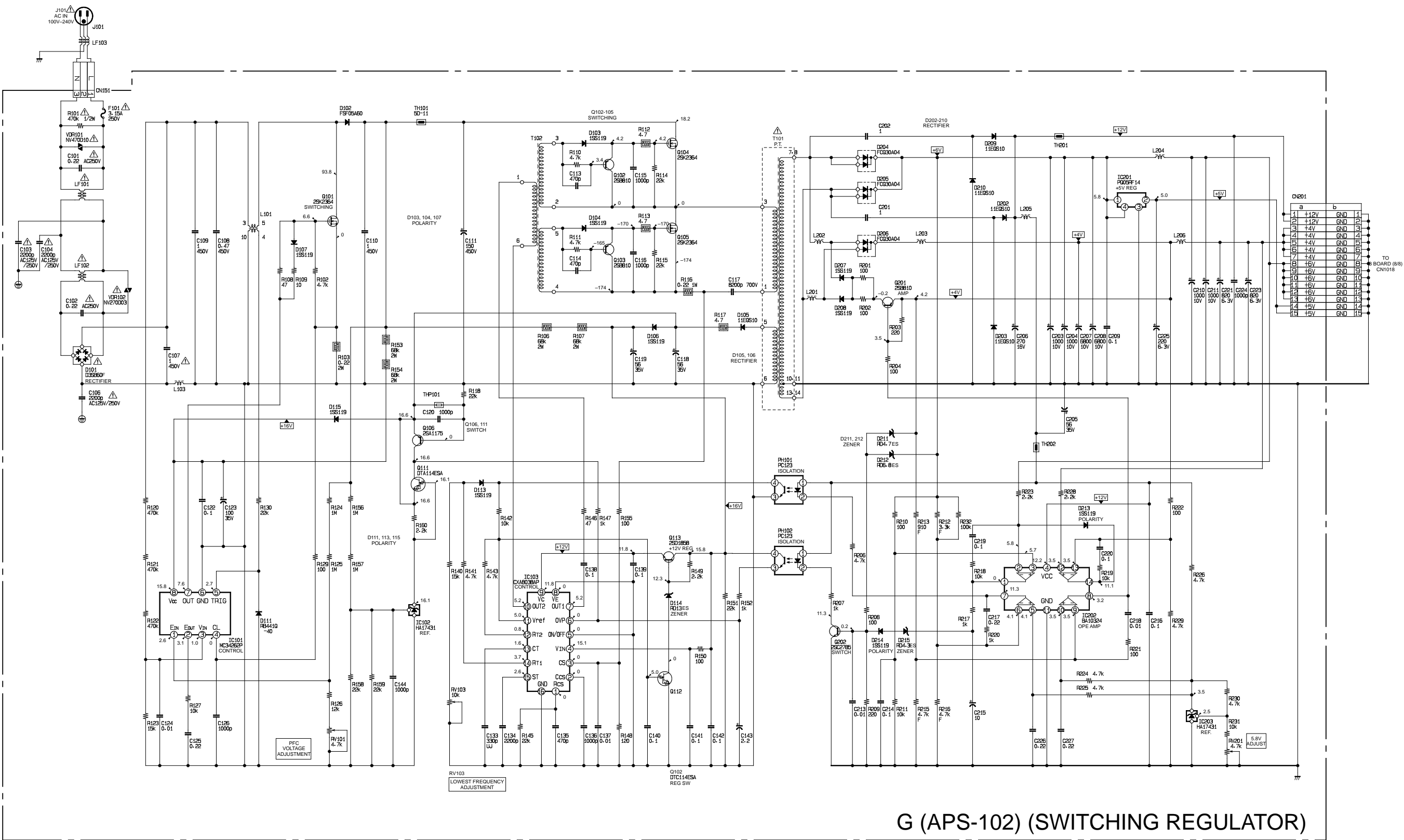


**G (APS-102)
BOARD**

D101	A-2
D102	B-1
D103	B-2
D104	C-2
D105	C-2
D106	C-2
D107	B-3
D111	B-3
D113	C-4
D114	C-3
D115	B-4
D202	D-2
D203	D-2
D204	D-1
D205	D-1
D206	D-1
D207	D-3
D208	D-3
D209	D-2
D210	D-2
D211	D-3
D212	D-3
D213	D-4
D214	D-3
D215	D-3
IC101	B-3
IC102	B-3
IC103	C-3
IC201	D-2
IC202	D-4
IC203	D-4
Q101	B-1
Q102	B-3
Q103	C-3
Q104	B-2
Q105	B-1
Q106	B-2
Q111	B-3
Q112	C-3
Q113	C-3
Q201	D-3
Q202	D-3
RV101	B-3
RV103	C-4
RV201	D-3



G (APS-102)
SUFFIX-11



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